

United States Department of Agriculture



Natural Resources Conservation Service



United States
Department of
the Interior



National Park Service Soil Survey of Delaware Water Gap National Recreation Area, New Jersey and Pennsylvania



How To Use This Soil Survey

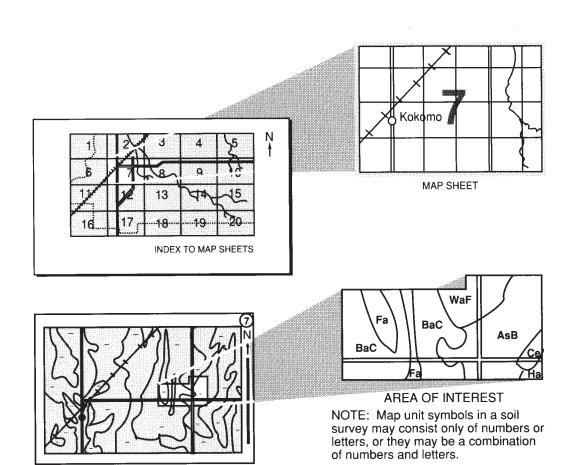
Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



MAP SHEET

National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service has leadership for the Federal part of the National Cooperative Soil Survey.

The soil maps in this survey may be copied without permission. Enlargement of the maps, however, could cause misunderstanding of the detail of mapping. If enlarged, the maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Citation

The recommended citation for this survey is:

United States Department of Agriculture, Natural Resources Conservation Service, and United States Department of the Interior, National Park Service. 2013. Soil survey of Delaware Water Gap National Recreation Area, New Jersey and Pennsylvania. http://soils.usda.gov/survey/printed_surveys.

Cover Caption

The Delaware Water Gap along the New Jersey-Pennsylvania border. The geologic formations and geomorphic processes that created the gap also determined the types of soils found in the park. The steep areas along the river consist of Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes. The Arnot soil is shallow and rock-filled. It is derived from residuum and colluvium.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov/.

Nondiscrimination Statement

Nondiscrimination Policy

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the basis of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, whether all or part of an individual's income is derived from any public assistance program, or protected genetic information. The Department prohibits discrimination in employment or in any program or activity conducted or funded by the Department. (Not all prohibited bases apply to all programs and/or employment activities.)

To File an Employment Complaint

If you wish to file an employment complaint, you must contact your agency's EEO Counselor (http://directives.sc.egov.usda.gov/33081.wba) within 45 days of the date of the alleged discriminatory act, event, or personnel action. Additional information can be found online at http://www.ascr.usda.gov/complaint filing file.html.

To File a Program Complaint

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at http://www.ascr.usda.gov/complaint_filing_cust.html or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter by mail to U.S. Department of Agriculture; Director, Office of Adjudication; 1400 Independence Avenue, S.W.; Washington, D.C. 20250-9419; by fax to (202) 690-7442; or by email to program.intake@usda.gov.

Persons with Disabilities

If you are deaf, are hard of hearing, or have speech disabilities and you wish to file either an EEO or program complaint, please contact USDA through the Federal Relay Service at (800) 877-8339 or (800) 845-6136 (in Spanish).

If you have other disabilities and wish to file a program complaint, please see the contact information above. If you require alternative means of communication for program information (e.g., Braille, large print, audiotape, etc.), please contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

Supplemental Nutrition Assistance Program

For additional information dealing with Supplemental Nutrition Assistance Program (SNAP) issues, call either the USDA SNAP Hotline Number at (800) 221-5689, which is also in Spanish, or the State Information/Hotline Numbers (http://directives.sc.egov.usda.gov/33085.wba).

All Other Inquiries

For information not pertaining to civil rights, please refer to the listing of the USDA Agencies and Offices (http://directives.sc.egov.usda.gov/33086.wba).

Contents

How To Use This Soil Survey	
Preface	
How This Survey Was Made	
Detailed Soil Map Units	
290836—Hoosic-Otisville complex, 25 to 60 percent slopes, very stony	
296265—Alden mucky silt loam	
296269—Alluvial land	
296271—Alvira and Watson very stony loams, 0 to 12 percent slopes	
296272—Bath channery silt loam, 3 to 8 percent slopes	
296273—Bath channery silt loam, 8 to 15 percent slopes	
296274—Bath channery silt loam, 15 to 25 percent slopes	
296275—Bath very stony silt loam, 0 to 8 percent slopes	
296276—Bath very stony silt loam, 8 to 25 percent slopes	
296277—Benson-Rock outcrop complex, 0 to 8 percent slopes	
296278—Benson-Rock outcrop complex, 8 to 25 percent slopes	
296279—Benson-Rock outcrop complex, 25 to 70 percent slopes	
296280—Braceville gravelly loam, 0 to 3 percent slopes	
296281—Braceville gravelly loam, 3 to 8 percent slopes	
296283—Buchanan extremely stony loam, 0 to 8 percent slopes	
296288—Chippewa and Norwich silt loams, 0 to 5 percent slopes	
296289—Chippewa and Norwich extremely stony soils, 0 to 8 percent slopes	
296295—Cut and fill land	
296297—Dekalb extremely stony loam, 8 to 25 percent slopes	
296298—Dekalb extremely stony loam, 25 to 80 percent slopes	
296303—Hazleton extremely stony sandy loam, 8 to 25 percent slopes	
296304—Holly silt loam	
296311—Lackawanna and Bath extremely stony soils, steep	
296312—Lackawanna channery loam, 2 to 8 percent slopes	
296313—Lackawanna channery loam, 8 to 15 percent slopes	
296315—Lackawanna extremely stony loam, 0 to 8 percent slopes	
296316—Lackawanna extremely stony loam, 8 to 25 percent slopes	
296317—Laidig extremely stony loam, 0 to 8 percent slopes	
296326—Lordstown extremely stony silt loam, 0 to 8 percent slopes	
296327—Lordstown extremely stony silt loam, 8 to 25 percent slopes	41
296328—Lordstown and Oquaga extremely stony soils, 25 to 70 percent	
slopes	
296329—Mardin channery silt loam, 2 to 8 percent slopes	
296330—Mardin channery silt loam, 8 to 15 percent slopes	
296331—Mardin very stony silt loam, 0 to 8 percent slopes	
296332—Mardin very stony silt loam, 8 to 25 percent slopes	
296335—Meckesville gravelly loam, 8 to 15 percent slopes	
296337—Meckesville very stony loam, 8 to 25 percent slopes	
296338—Morris channery silt loam, 2 to 10 percent slopes	
296339—Morris extremely stony silt loam, 0 to 8 percent slopes	52

296340—Morris extremely stony silt loam, 8 to 20 percent slopes	
296341—Mucky peat, deep	
296342—Mucky peat, shallow	
296343—Oquaga-Lackawanna channery loams, 3 to 8 percent slopes	57
296344—Oquaga-Lackawanna channery loams, 8 to 15 percent slopes	59
296346—Oquaga-Lackawanna extremely stony loams, 0 to 8 percent slopes	
296347—Oquaga-Lackawanna extremely stony loams, 8 to 25 percent slopes	62
296348—Philo silt loam	64
296349—Pope silt loam	65
296350—Pope silt loam, high bottom	
296351—Rexford gravelly silt loam, 0 to 3 percent slopes	67
296355—Sheffield silt loam	69
296363—Very stony land and Rock outcrops, steep	70
296369—Wayland silty clay loam	70
296376—Wellsboro channery loam, 3 to 8 percent slopes	71
296379—Wellsboro extremely stony loam, 8 to 25 percent slopes	73
296385—Wyoming gravelly sandy loam, 0 to 3 percent slopes	74
296386—Wyoming gravelly sandy loam, 3 to 8 percent slopes	76
296387—Wyoming gravelly sandy loam, 8 to 15 percent slopes	77
296388—Wyoming gravelly sandy loam, 15 to 25 percent slopes	78
296389—Wyoming gravelly sandy loam, 25 to 70 percent slopes	79
296390 (W)—Water	
297185—Edgemere-Shohola complex, 3 to 15 percent slopes, very rubbly	81
297186—Edgemere extremely stony loam, 0 to 3 percent slopes, very rubbly	83
297188—Manlius-Arnot-Rock outcrop complex, 15 to 30 percent slopes, rubbly .	84
297189—Manlius-Arnot-Rock outcrop complex, 30 to 80 percent slopes, rubbly .	86
297190—Braceville fine sandy loam	89
297191—Wyalusing fine sandy loam	
297192—Pope fine sandy loam	91
297193—Paupack mucky peat	92
297196—Freetown mucky peat	
297197—Manlius very channery silt loam, 3 to 8 percent slopes, very bouldery	95
297198—Manlius very channery silt loam, 8 to 15 percent slopes, very	
bouldery	96
297201—Oquaga very stony loam, 15 to 30 percent slopes, extremely	
bouldery	
297203—Delaware fine sandy loam, 0 to 3 percent slopes	
297204—Delaware fine sandy loam, 3 to 8 percent slopes	
297205—Delaware fine sandy loam, 8 to 20 percent slopes	
297209—Philo loam	
297210—Barbour fine sandy loam	104
297216—Wurtsboro stony fine sandy loam, 0 to 8 percent slopes, extremely	
stony	106
297217—Wurtsboro stony fine sandy loam, 8 to 15 percent slopes, extremely	
stony	
297227—Arnot very channery loam, 3 to 15 percent slopes, very rocky	
297228—Arnot very channery loam, 15 to 35 percent slopes, very rocky	
297229—Wyoming very cobbly sandy loam, 3 to 8 percent slopes	
297230—Wyoming very cobbly sandy loam, 8 to 15 percent slopes	
297231—Wyoming very cobbly sandy loam, 15 to 30 percent slopes	
297236—Suncook loamy sand, 0 to 8 percent slopes	
297237—Mardin channery silt loam, 0 to 8 percent slopes, stony	
297238—Mardin channery silt loam, 8 to 15 percent slopes, stony	
297239—Mardin stony loam, 0 to 8 percent slopes, extremely stony	120

297240—Mardin stony loam, 8 to 15 percent slopes, extremely stony	121
297241—Unadilla silt loam	123
297242—Shohola-Edgemere complex, 0 to 8 percent slopes, very rubbly	124
297243—Shohola-Edgemere complex, 8 to 15 percent slopes, very rubbly	126
297244—Lordstown-Swartswood complex, 0 to 8 percent slopes, extremely	
stony	127
297247—Chenango gravelly fine sandy loam, 0 to 8 percent slopes	129
297248—Chenango gravelly fine sandy loam, 8 to 15 percent slopes	131
297249—Chenango gravelly fine sandy loam, 15 to 25 percent slopes	132
297253—Craigsville-Wyoming complex, 0 to 8 percent slopes, extremely	
stony	133
297254—Pits, shale, and gravel	136
298049—Wurtsboro loam, 0 to 8 percent slopes, extremely stony	
298050—Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely	
stony	138
298051—Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely	
stony	140
298075—Colonie loamy fine sand, 3 to 8 percent slopes	
298188—Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes,	
extremely stony	143
298189—Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes,	
extremely stony	144
298221—Swartswood loam, 0 to 8 percent slopes, extremely stony	
298222—Swartswood loam, 8 to 15 percent slopes, extremely stony	
298223—Swartswood loam, 15 to 35 percent slopes, extremely stony	
298255—Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded	
298256—Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded	
298257—Wallpack silt loam, 8 to 15 percent slopes	
298258—Wallpack silt loam, 15 to 25 percent slopes	
298259—Wallpack silt loam, 3 to 8 percent slopes, extremely stony	
298260—Wallpack silt loam, 8 to 15 percent slopes, extremely stony	
298261—Wallpack silt loam, 3 to 8 percent slopes	
298262—Wallpack silt loam, 15 to 35 percent slopes, extremely stony	
298265—Venango silt loam, 0 to 8 percent slopes, extremely stony	
298266—Venango silt loam, 8 to 15 percent slopes, extremely stony	
298409—Swartswood loam, 0 to 8 percent slopes, extremely stony	
298411—Swartswood loam, 8 to 15 percent slopes, extremely stony	
298413—Swartswood loam, 15 to 35 percent slopes, extremely stony	
318498—Hazen-Hoosic complex, 3 to 8 percent slopes, very stony	
318533—Hazen-Hoosic complex, 0 to 3 percent slopes, very stony	
319783—Catden mucky peat, 0 to 2 percent slopes	
319784—Fredon-Halsey complex, 0 to 3 percent slopes, very stony	
543222—Andover-Buchanan gravelly loams, 0 to 8 percent slopes, extremely	
stony	174
543243—Berks-Weikert complex, 25 to 60 percent slopes	
543246—Buchanan gravelly loam, 3 to 8 percent slopes	
543247—Buchanan gravelly loam, 0 to 8 percent slopes, extremely stony	
543257—Chippewa silt loam, 0 to 3 percent slopes	
543258—Chippewa silt loam, 3 to 8 percent slopes	
543259—Chippewa gravelly silt loam, 0 to 8 percent slopes, extremely stony	
543271—Delaware fine sandy loam, 0 to 3 percent slopes	
543276—Fluvaquents	
543292—Hazleton very channery loam, 8 to 25 percent slopes, extremely	
stony	190

543293—Hazleton very channery loam, 25 to 60 percent slopes, extremely	
stony	.192
543299—Laidig very gravelly loam, 0 to 8 percent slopes, extremely stony	.193
543300—Laidig very gravelly loam, 8 to 25 percent slopes, extremely stony	.194
543304—Laidig-Rubble land complex, 25 to 60 percent slopes	.196
543318—Rubble land	
543327—Swartswood gravelly loam, 3 to 8 percent slopes	.200
543330—Swartswood and Wurtsboro soils, 0 to 8 percent slopes, extremely	
stony	.203
543331—Swartswood and Wurtsboro soils, 8 to 25 percent slopes, extremely	
stony	.206
543359—Volusia gravelly silt loam, 3 to 8 percent slopes	
543360—Volusia gravelly silt loam, 0 to 8 percent slopes, extremely stony	
543374—Wurtsboro gravelly silt loam, 3 to 8 percent slopes	
	.213
612280—Scio silt loam, 0 to 3 percent slopes	
612666—Colonie loamy fine sand, 0 to 3 percent slopes	
612668—Hoosic-Hazen complex, 8 to 15 percent slopes, very stony	
612724—Lordstown-Wallpack complex, 15 to 35 percent slopes, very rocky	
612732—Atherton mucky silt loam, 0 to 3 percent slopes	
·	.224
612753—Wallpack fine sandy loam, aeolian mantle, 8 to 15 percent slopes,	
very stony	.225
612756—Wallpack fine sandy loam, aeolian mantle, 0 to 8 percent slopes,	.225
very stony	.227
612757—Wallpack fine sandy loam, aeolian mantle, 15 to 35 percent slopes,	
very stony	.228
612767—Wellsboro silt loam, 8 to 15 percent slopes, extremely stony	
612768—Wellsboro silt loam, 0 to 8 percent slopes, extremely story	
613393—Alden silt loam, 0 to 8 percent slopes, extremely story	
613447—Unadilla silt loam, 0 to 3 percent slopes	
613448—Unadilla silt loam, 3 to 8 percent slopes	
614075—Wurtsboro-Swartswood complex, 15 to 35 percent slopes, extremely	.235
· · · · · · · · · · · · · · · · · · ·	.237
•	
620179—Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky	
620180—Arnot-Lordstown-Rock outcrop complex, 15 to 35 percent slopes	
620181—Arnot-Lordstown-Rock outcrop complex, 35 to 60 percent slopes	
623089—Chippewa silt loam, 0 to 8 percent slopes, extremely stony	
623109—Farmington-Rock outcrop complex, 0 to 15 percent slopes	
624811—Galway loam, 35 to 60 percent slopes, very rocky	.248
624813—Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes,	250
extremely stony	
624816—Lordstown-Wallpack complex, 8 to 15 percent slopes, very rocky	
624822—Lordstown-Wallpack complex, 15 to 25 percent slopes	
624823—Lordstown-Wallpack complex, 8 to 15 percent slopes	
624824—Lordstown-Wallpack complex, 0 to 8 percent slopes	
624826—Manlius-Nassau complex, 35 to 60 percent slopes, very rocky	
624827—Nassau-Manlius complex, 0 to 8 percent slopes, very rocky	
624828—Nassau-Manlius complex, 8 to 15 percent slopes, very rocky	
624829—Nassau-Manlius complex, 15 to 35 percent slopes, very rocky	
624832—Nassau-Rock outcrop complex, 35 to 60 percent slopes	
624841—Oquaga-Rock outcrop complex, 35 to 60 percent slopes	
624845—Rock outcrop-Farmington-Galway complex, 15 to 35 percent slopes	.271

624846—Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes	
626816—Udifluvents, 0 to 3 percent slopes, occasionally flooded	.275
635458—Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky	.276
635459—Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky	.278
740953—Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded	.280
740968—Nassau-Manlius complex, 8 to 15 percent slopes, very rocky	.282
740969—Nassau-Manlius complex, 15 to 35 percent slopes, very rocky	.284
740971—Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky	.285
740972—Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky	.288
740974—Oquaga-Rock outcrop complex, 35 to 60 percent slopes	
740975—Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes	.292
740987—Scio silt loam, 0 to 3 percent slopes	
740988—Udifluvents, 0 to 3 percent slopes, occasionally flooded	
740991—Unadilla silt loam, 0 to 3 percent slopes	
740992—Unadilla silt loam, 3 to 8 percent slopes	
740995—Wellsboro silt loam, 0 to 8 percent slopes, extremely stony	
740996—Wellsboro silt loam, 8 to 15 percent slopes, extremely stony	.301
741149—Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes,	
extremely stony	.302
741150—Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes,	
extremely stony	.304
801114—Oquaga-Rock outcrop complex, 0 to 15 percent slopes	
810906—Oquaga-Rock outcrop complex, 0 to 15 percent slopes	
	.309
	.310
	.312
1147469—Arnot-Lordstown-Rock outcrop complex, 35 to 60 percent slopes	
1147470—Atherton mucky silt loam, 0 to 3 percent slopes	
1147471—Catden mucky peat, 0 to 2 percent slopes	
1147474—Chippewa silt loam, 0 to 8 percent slopes, extremely stony	
1147475—Colonie loamy fine sand, 0 to 3 percent slopes	
1147478—Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded	
1147482—Fredon-Halsey complex, 0 to 3 percent slopes, very stony	
1147485—Hazen-Hoosic complex, 3 to 8 percent slopes, very stony	
1147490—Hoosic-Hazen complex, 8 to 15 percent slopes, very stony	
1147491—Hoosic-Otisville complex, 25 to 60 percent slopes, very stony	
1147492—Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes,	.00.
	.333
1147500—Wurtsboro loam, 0 to 8 percent slopes, extremely stony	
1147501—Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely	
stony	335
1147502—Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely	
stony	337
1147527—Udorthents-Urban land complex, 0 to 8 percent slopes	
1147532—Udorthents, 0 to 8 percent slopes, smoothed	
1147533—Wurtsboro-Swartswood complex, 15 to 35 percent slopes,	
extremely stony	341
1948749—Arnot channery silt loam, 3 to 8 percent slopes	
1948750—Arnot channery silt loam, 8 to 15 percent slopes	
1948751—Arnot channery silt loam, 15 to 25 percent slopes	
1948774—Conotton gravelly loam, 3 to 8 percent slopes	
1948775—Conotton gravelly loam, 8 to 15 percent slopes	
1948776—Conotton gravelly loam, 15 to 25 percent slopes	
1948777—Conotton gravelly loam, 25 to 65 percent slopes	350

1948797—Manlius channery silt loam, 3 to 8 percent slopes	
1948802—Manlius channery silt loam, 8 to 15 percent slopes	
1948818—Manlius channery silt loam, 15 to 25 percent slopes	
1948832—Penargyl channery silt loam, 3 to 8 percent slopes	
1948846—Phelps gravelly silt loam, 3 to 8 percent slopes	
1948855—Udorthents, loamy	
1948989—Urban land-Delaware complex, 0 to 8 percent slopes	
Use and Management of the Soils	
Interpretive Ratings	
Rating Class Terms	
Numerical Ratings	
Land Capability Classification	
Prime Farmland and Other Important Farmlands	
Hydric Soils	
Landscape, Landform, and Parent Material	
Land Management	
Recreation	
Engineering	
Dwellings and Small Commercial Buildings	
Roads and Streets, Shallow Excavations, and Landscaping	
Sewage Disposal	
Source of Gravel and Sand	
Source of Reclamation Material, Roadfill, and Topsoil	
Ponds and Embankments	
Soil Properties Engineering Properties	
Physical Soil Properties	
Erosion Properties	
Total Soil Carbon	
Chemical Soil Properties	
Water Features	
Soil Features	
Classification of the Soils	
Soil Series and Their Morphology	
Atherton Taxadjunct	
Colonie Series	
Delaware Series	
Lackawanna Series	
Oquaga Series	
Scio Series	
Udifluvents	
Unadilla Series	
Wallpack Series	
Wellsboro Series	
Formation of the Soils	
Setting	
Factors of Soil Formation	
Parent Material	
Climate	
Organisms	
Time	
Topography and Relief	
Processes of Soil Horizon Differentiation	
Pedogenesis in the Delaware soil	

References	429
Glossary	431
Tables	
Table 1.—Soil Legend	450
Table 2.—Land Capability Classification	
Table 3.—Prime Farmland and Other Important Farmland	
Table 4.—Hydric Soils	
Table 5.—Landscape, Landform, and Parent Material	496
Table 6a.—Land Management, Part I (Planting)	523
Table 6b.—Land Management, Part II (Hazard of Erosion and Suitability for	
Roads)	548
Table 6c.—Land Management, Part III (Site Preparation)	575
Table 6d.—Land Management, Part IV (Site Restoration)	598
Table 7a.—Recreational Development, Part I (Camp and Picnic Areas)	629
Table 7b.—Recreational Development, Part II (Trail Management)	661
Table 8.—Dwellings and Small Commercial Buildings	685
Table 9.—Roads and Streets, Shallow Excavations, and Landscaping	717
Table 10.—Sewage Disposal	755
Table 11.—Source of Gravel and Sand	794
Table 12.—Source of Reclamation Material, Roadfill, and Topsoil	820
Table 13.—Ponds and Embankments	855
Table 14.—Engineering Properties	884
Table 15.—Physical Soil Properties	978
Table 16.—Erosion Properties	1013
Table 17.—Total Soil Carbon	
Table 18.—Chemical Soil Properties	1063
Table 19.—Water Features	
Table 20.—Soil Features	
Table 21.—Taxonomic Classification of the Soils	1168
Table 22.—Soil Classification Key	1170

Issued June 2013

Preface

This soil survey was developed in conjunction with the National Park Service's Soil Inventory and Monitoring Program and is intended to serve as the official source document for soils occurring within Delaware Water Gap National Recreation Area.

This soil survey contains information that affects current and future land use planning in the park. It contains predictions of soil behavior for selected land uses. The survey highlights soil limitations, actions needed to overcome the limitations, and the impact of selected land uses on the environment. It is designed to meet the needs of the National Park Service and its partners to better understand the properties of the soils in the park and the effects of these soil properties on various natural ecological characteristics. This knowledge can help the National Park Service and its partners to understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each map unit is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or at the local headquarters of the National Park Service.

Soil Survey of Delaware Water Gap National Recreation Area, New Jersey and Pennsylvania

United States Department of Agriculture, Natural Resources Conservation Service, and United States Department of the Interior, National Park Service

Delaware Water Gap National Recreation Area is located along the Delaware River in New Jersey and Pennsylvania (fig. 1). This survey was made in conjunction with the National Park Service's Soil Inventory and Monitoring Program to provide information about the soils and miscellaneous areas within Delaware Water Gap National Recreation Area.

How This Survey Was Made

The soil survey data was extracted in May 2012 from county-based soil survey data for Pike, Monroe, and Northampton Counties in Pennsylvania and for Warren and Sussex Counties in New Jersey. The project scale was 1:24,000 for Sussex and Pike Counties, 1:20,000 for Monroe County, and 1:12,000 for Northampton and Warren Counties. Correlation dates range from 1975 to 2007. Quality assurance for the data regarding Northampton County was performed at the soil survey regional office in Morgantown, West Virginia. Quality assurance for the rest of the data was performed at the soil survey regional office in Amherst, Massachusetts. A total of 236 map units are included in this survey, including 611 named components. Because data was clipped from more than one county-based set of soil maps, this survey includes some detailed soil map units that have the same name but different map symbols and properties. Water units were combined.

The information in this survey includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.



Figure 1.—Location of Delaware Water Gap National Recreation Area near the New Jersey, New York, and Pennsylvania borders.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units).

Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they delineated the boundaries of these bodies on digital imagery and identified each as a specific map unit.

Detailed Soil Map Units

The map units delineated on the detailed soil map in this survey represent the soils or miscellaneous areas in the park. The map unit descriptions in this section, along with the soil maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. The soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name

of a soil phase commonly indicates a feature that affects use or management. For example, Bath channery silt loam, 3 to 8 percent slopes, is a phase of the Bath series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Hoosic-Otisville complex, 25 to 60 percent slopes, very stony, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alvira and Watson very stony loams, 0 to 12 percent slopes, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Urban land is an example.

Table 1 lists each map unit in the park, its major and minor components, and the percentage of each component in the unit. Because not all minor components were fully identified at the time of mapping, the map unit compositions do not add up to 100 percent for all units in the table and in the map unit descriptions. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

290836—Hoosic-Otisville complex, 25 to 60 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Hoosic, very stony, and similar soils: 50 percent Otisville, very stony, and similar soils: 40 percent

Dissimilar minor components: 10 percent

Description of Hoosic, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Humic Dystrudepts

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 25 to 60 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap—1 to 9 inches; gravelly loam

Bw—9 to 21 inches; very gravelly coarse sandy loam

2C1—21 to 27 inches; extremely gravelly loamy coarse sand

2C2—27 to 37 inches; extremely gravelly coarse sand 2C3—37 to 49 inches; extremely gravelly coarse sand

2C4—49 to 60 inches; extremely gravelly coarse sand

Description of Otisville, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Typic Udorthents

Setting

Landscape: Outwash plains Landform: Valley trains Slope: 25 to 60 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic Properties and Qualities

Runoff: Low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; gravelly sandy loam

Bw1—2 to 7 inches; very gravelly loamy sand

Bw2—7 to 11 inches; very gravelly loamy coarse sand BC—11 to 19 inches; very gravelly loamy coarse sand C1—19 to 31 inches; extremely gravelly coarse sand C2—31 to 43 inches; extremely gravelly coarse sand C3—43 to 60 inches; stratified sand to loamy sand

Minor Components

Hazen, very stony

Percent of map unit: 10 percent

Landform: Valley trains

Aspect (representative): North Aspect (range): All aspects Slope: 25 to 60 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

296265—Alden mucky silt loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 295 to 1,495 feet

Mean annual precipitation: 30 to 45 inches Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 140 to 180 days

Map Unit Composition

Alden and similar soils: 100 percent

Description of Alden Soil

Soil Classification

Fine-loamy, mixed, active, nonacid, mesic Mollic Endoaquepts

Setting

Landform: Depressions on till plains

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Head slope, base slope, interfluve

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible Parent material: Till

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None

Frequency of ponding: Frequent Depth to water table: At the surface Drainage class: Very poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

0 to 9 inches; mucky silt loam 9 to 35 inches; silty clay loam 35 to 60 inches; gravelly loam

296269—Alluvial land

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,000 feet

Mean annual precipitation: 30 to 45 inches Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 130 to 200 days

Map Unit Composition

Fluvents (alluvial land) and similar soils: 70 percent

Dissimilar minor components: 20 percent

Description of Fluvents (Alluvial Land)

Soil Classification

Fluvents

Setting

Landform: Flood plains Slope: 0 to 3 percent

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Runoff: Very high

Parent material: Alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Frequent Frequency of ponding: None

Depth to water table: At the surface to a depth of 36 inches

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 6.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

0 to 6 inches; sandy loam 6 to 42 inches; sandy loam 42 to 60 inches; gravelly silt loam

Minor Components

Holly

Percent of map unit: 20 percent

Landform: Depressions on flood plains, backswamps Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Hydric soil status: Yes

296271—Alvira and Watson very stony loams, 0 to 12 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Mean annual precipitation: 34 to 56 inches Mean annual air temperature: 40 to 54 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Alvira and similar soils: 55 percent Watson and similar soils: 35 percent Dissimilar minor components: 10 percent

Description of Alvira Soil

Soil Classification

Fine-loamy, mixed, active, mesic Aeric Fragiaquults

Setting

Landform: Glaciated hillslopes

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve

Slope: 0 to 12 percent Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high Parent material: Till

Restrictive feature(s): Fragipan at a depth of 15 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 10 inches; gravelly loam 10 to 21 inches; gravelly silt loam 21 to 60 inches; very gravelly silt loam

Description of Watson Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiudults

Setting

Landform: Valley sides

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 0 to 12 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Old till derived from sedimentary rock Restrictive feature(s): Fragipan at a depth of 18 to 32 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 18 to 36 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Moderate (about 4.5 percent linear extensibility)

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 10 inches; gravelly loam

10 to 27 inches; gravelly silty clay loam 27 to 60 inches; gravelly clay loam

Minor Components

Shelmadine

Percent of map unit: 10 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

296272—Bath channery silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Bath and similar soils: 85 percent

Dissimilar minor components: 10 percent

Description of Bath Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Glaciated mountains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Upper third of mountain flank, side slope

Slope: 3 to 8 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): Southeast
Aspect (range): All aspects

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 21 to 38 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 8 inches; channery silt loam

8 to 27 inches; channery silt loam 27 to 60 inches; channery silt loam 60 to 64 inches; very channery loam

Minor Components

Lackawanna

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Mardin

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

296273—Bath channery silt loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Bath and similar soils: 85 percent

Dissimilar minor components: 10 percent

Description of Bath Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Glaciated mountains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Upper third of mountain flank, side slope

Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast Aspect (range): All aspects

Properties and Qualities

Soil temperature regime: Mesic

Runoff: High

Restrictive feature(s): Fragipan at a depth of 21 to 38 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 8 inches; channery silt loam 8 to 27 inches; channery silt loam 27 to 60 inches; channery silt loam 60 to 64 inches; very channery loam

Minor Components

Lackawanna

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Mardin

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

296274—Bath channery silt loam, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Bath and similar soils: 85 percent

Dissimilar minor components: 10 percent

Description of Bath Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Glaciated mountains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Upper third of mountain flank, side slope

Slope: 15 to 25 percent Down-slope shape: Convex

Across-slope shape: Convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 21 to 38 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 8 inches; channery silt loam 8 to 27 inches; channery silt loam 27 to 60 inches; channery silt loam 60 to 64 inches; very channery loam

Minor Components

Lackawanna

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Hydric soil status: No

Mardin

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Hydric soil status: No

296275—Bath very stony silt loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 40 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 140 days

Map Unit Composition

Bath and similar soils: 90 percent

Description of Bath Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Glaciated mountains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Upper third of mountain flank, side slope

Slope: 3 to 8 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone,

and shale

Restrictive feature(s): Fragipan at a depth of 21 to 38 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 8 inches; channery silt loam 8 to 27 inches; channery loam 27 to 60 inches; very channery loam

60 to 64 inches; flaggy loam

296276—Bath very stony silt loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 40 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 140 days

Map Unit Composition

Bath and similar soils: 90 percent

Description of Bath Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Glaciated mountains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Upper third of mountain flank, side slope

Slope: 8 to 25 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived mainly from gray and brown siltstone, sandstone,

and shale

Restrictive feature(s): Fragipan at a depth of 21 to 38 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 8 inches; channery silt loam 8 to 27 inches; channery loam 27 to 60 inches; very channery loam

60 to 64 inches; flaggy loam

296277—Benson-Rock outcrop complex, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 85 to 1,000 feet

Mean annual precipitation: 28 to 45 inches Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 120 to 180 days

Map Unit Composition

Benson and similar soils: 55 percent

Rock outcrop: 15 percent

Description of Benson Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Eutrudepts

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Interfluve, side slope

Slope: 0 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Loamy till

Restrictive feature(s): Lithic bedrock at a depth of 12 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

0 to 8 inches; channery silt loam 8 to 18 inches; very channery silt loam 18 to 22 inches; unweathered bedrock

296278—Benson-Rock outcrop complex, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 85 to 1,000 feet

Mean annual precipitation: 28 to 51 inches Mean annual air temperature: 40 to 55 degrees F

Frost-free period: 100 to 180 days

Map Unit Composition

Benson and similar soils: 60 percent

Rock outcrop: 20 percent

Description of Benson Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Eutrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Side slope, interfluve

Slope: 8 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till

Restrictive feature(s): Lithic bedrock at a depth of 12 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

0 to 8 inches; channery silt loam 8 to 18 inches; very channery silt loam

Description of Rock Outcrop

Setting

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: D

296279—Benson-Rock outcrop complex, 25 to 70 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 85 to 1,000 feet

Mean annual precipitation: 28 to 51 inches

Mean annual air temperature: 40 to 55 degrees F

Frost-free period: 100 to 180 days

Map Unit Composition

Benson and similar soils: 60 percent

Rock outcrop: 25 percent

Description of Benson Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Eutrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Side slope, interfluve

Slope: 25 to 70 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Loamy till

Restrictive feature(s): Lithic bedrock at a depth of 12 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

0 to 8 inches; channery silt loam 8 to 18 inches; very channery silt loam 18 to 22 inches; unweathered bedrock

Description of Rock Outcrop

Setting

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

296280—Braceville gravelly loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Mean annual precipitation: 36 to 56 inches Mean annual air temperature: 46 to 54 degrees F

Frost-free period: 145 to 175 days

Map Unit Composition

Braceville and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Braceville Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Outwash terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, concave Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy outwash

Restrictive feature(s): Fragipan at a depth of 18 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 18 to 36 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 3 inches; gravelly loam 3 to 30 inches; gravelly silt loam 30 to 55 inches; very gravelly loam

55 to 60 inches; stratified sand and gravel

Minor Components

Rexford, poorly drained

Percent of map unit: 10 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: Yes

296281—Braceville gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Mean annual precipitation: 34 to 56 inches Mean annual air temperature: 40 to 54 degrees F

Frost-free period: 100 to 175 days

Map Unit Composition

Braceville and similar soils: 90 percent Dissimilar minor components: 5 percent

Description of Braceville Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Outwash terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Coarse-loamy outwash

Restrictive feature(s): Fragipan at a depth of 18 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 18 to 36 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 3 inches; gravelly loam 3 to 30 inches; gravelly silt loam 30 to 55 inches; very gravelly loam

55 to 60 inches; stratified sand and gravel

Minor Components

Rexford, poorly drained

Percent of map unit: 5 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

296283—Buchanan extremely stony loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 2,400 feet

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 57 degrees F

Frost-free period: 100 to 170 days

Map Unit Composition

Buchanan and similar soils: 90 percent Dissimilar minor components: 5 percent

Description of Buchanan Soil

Soil Classification

Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults

Setting

Landform: Valley sides, mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountain flank, base slope

Slope: 0 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Mountain slope colluvium derived from sedimentary rock

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Soil Survey of Delaware Water Gap National Recreation Area

Depth to water table: About 18 to 36 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 4 inches; channery loam 4 to 25 inches; gravelly loam 25 to 60 inches; gravelly loam

Minor Components

Shelmadine

Percent of map unit: 5 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

296288—Chippewa and Norwich silt loams, 0 to 5 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 500 to 1,000 feet

Mean annual precipitation: 30 to 45 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Chippewa and similar soils: 48 percent Norwich and similar soils: 48 percent

Description of Chippewa Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landform: Depressions Slope: 0 to 5 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 10 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 2 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Ap-0 to 8 inches; silt loam

Eg—8 to 16 inches; channery silt loam Bxg—16 to 48 inches; gravelly silt loam C—48 to 80 inches; very gravelly loam

Description of Norwich Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landform: Depressions Slope: 0 to 5 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 10 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 2 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Ap-0 to 8 inches; silt loam

Eg—8 to 16 inches; channery silt loam

Bxg—16 to 48 inches; channery silt loam C—48 to 80 inches; channery silt loam

296289—Chippewa and Norwich extremely stony soils, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 51 inches
Mean annual air temperature: 40 to 50 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Chippewa and similar soils: 47 percent Norwich and similar soils: 47 percent

Description of Chippewa Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landform: Depressions Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 10 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 2 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

A—0 to 8 inches; channery silt loam Eg—8 to 16 inches; channery silt loam Bxg—16 to 48 inches; gravelly silt loam C—48 to 80 inches; very gravelly loam

Description of Norwich Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landform: Depressions Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 10 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 2 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

A—0 to 8 inches; channery silt loam Eg—8 to 16 inches; channery silt loam Bxg—16 to 48 inches; channery silt loam C—48 to 80 inches; channery silt loam

296295—Cut and fill land

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Mean annual precipitation: 34 to 51 inches
Mean annual air temperature: 40 to 50 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Udorthents, cut and fill, and similar soils: 90 percent

Description of Udorthents, Cut and Fill

Setting

Slope: 0 to 25 percent

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Parent material: Manmade and altered materials from mixed rock types

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 12 to 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups Hydric soil status: No Hydrologic soil group: B/D

296297—Dekalb extremely stony loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,000 to 2,795 feet

Mean annual precipitation: 36 to 60 inches Mean annual air temperature: 46 to 59 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Dekalb and similar soils: 100 percent

Description of Dekalb Soil

Soil Classification

Loamy-skeletal, mixed, siliceous, active, mesic Typic Dystrudepts

Setting

Landform: Mountains

Landform position (two-dimensional): Shoulder, backslope Landform position (three-dimensional): Mountain flank

Slope: 8 to 25 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): Southeast
Aspect (range): All aspects

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Residuum weathered from sandstone and shale Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 7 inches; very channery loam

7 to 24 inches; very channery sandy loam 24 to 32 inches; very channery sandy loam 32 to 36 inches; unweathered bedrock

296298—Dekalb extremely stony loam, 25 to 80 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,000 to 2,795 feet

Mean annual precipitation: 36 to 60 inches Mean annual air temperature: 46 to 59 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Dekalb and similar soils: 100 percent

Description of Dekalb Soil

Soil Classification

Loamy-skeletal, mixed, siliceous, active, mesic Typic Dystrudepts

Setting

Landform: Mountains

Landform position (two-dimensional): Shoulder, backslope Landform position (three-dimensional): Mountain flank

Slope: 25 to 80 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Residuum weathered from sandstone and shale Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 7 inches; very channery loam

7 to 24 inches; very channery sandy loam 24 to 32 inches; very channery sandy loam 32 to 36 inches; unweathered bedrock

296303—Hazleton extremely stony sandy loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,095 to 2,495 feet

Mean annual precipitation: 36 to 55 inches Mean annual air temperature: 46 to 55 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Hazleton and similar soils: 100 percent

Description of Hazleton Soil

Soil Classification

Loamy-skeletal, siliceous, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains

Landform: Gray and red sandstone mountain slopes
Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Upper third of mountain flank

Slope: 8 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Residuum weathered from sandstone

Restrictive feature(s): Lithic bedrock at a depth of 40 to 96 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

0 to 5 inches; very channery sandy loam

5 to 31 inches; channery sandy loam

31 to 58 inches; very channery coarse sandy loam

58 to 69 inches; unweathered bedrock

296304—Holly silt loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 835 feet

Mean annual precipitation: 30 to 40 inches Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 133 to 187 days

Map Unit Composition

Holly and similar soils: 100 percent

Description of Holly Soil

Soil Classification

Fine-loamy, mixed, superactive, nonacid, mesic Typic Fluvaquents

Setting

Landform: Depressions on flood plains, backswamps Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Loamy alluvium derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Frequent Frequency of ponding: None

Depth to water table: At the surface to a depth of 6 inches

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 10.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

0 to 8 inches; silt loam

8 to 28 inches; very fine sandy loam

28 to 41 inches; loam

41 to 60 inches; stratified gravelly sand to silt loam

296311—Lackawanna and Bath extremely stony soils, steep

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Lackawanna and similar soils: 40 percent

Bath and similar soils: 30 percent

Dissimilar minor components: 20 percent

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 25 to 70 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 21 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery silt loam

Description of Bath Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Soil Survey of Delaware Water Gap National Recreation Area

Setting

Landform: Glaciated mountains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Upper third of mountain flank, side slope

Slope: 25 to 70 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 21 to 38 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 8 inches; channery silt loam 8 to 27 inches; channery silt loam 27 to 60 inches; channery silt loam 60 to 64 inches; very channery loam

Minor Components

Lordstown

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

Mardin

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

Oquaga

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Hydric soil status: No

Wellsboro

Percent of map unit: 5 percent

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Hydric soil status: No

296312—Lackawanna channery loam, 2 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Lackawanna and similar soils: 80 percent Dissimilar minor components: 10 percent

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 17 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery silt loam

Minor Components

Bath

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Wellsboro

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

296313—Lackawanna channery loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Lackawanna and similar soils: 80 percent Dissimilar minor components: 10 percent

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 17 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery silt loam

Minor Components

Bath

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Lackawanna

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

296315—Lackawanna extremely stony loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Lackawanna and similar soils: 80 percent Dissimilar minor components: 10 percent

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 21 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery silt loam

Minor Components

Bath

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Wellsboro

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

296316—Lackawanna extremely stony loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Lackawanna and similar soils: 80 percent Dissimilar minor components: 10 percent

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 8 to 25 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 21 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery silt loam

Minor Components

Bath

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

Wellsboro

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

296317—Laidig extremely stony loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 3,795 feet

Mean annual precipitation: 34 to 40 inches

Mean annual air temperature: 50 to 57 degrees F

Frost-free period: 120 to 175 days

Map Unit Composition

Laidig and similar soils: 100 percent

Description of Laidig Soil

Soil Classification

Fine-loamy, siliceous, active, mesic Typic Fragiudults

Setting

Landform: Mountains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountain flank

Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Colluvium derived from sandstone and siltstone Restrictive feature(s): Fragipan at a depth of 30 to 50 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 30 to 48 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 6 inches; very gravelly loam 6 to 33 inches; gravelly loam 33 to 65 inches; very gravelly loam

296326—Lordstown extremely stony silt loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Lordstown and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Crest, side slope

Slope: 3 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 7 inches; channery silt loam Bw—7 to 26 inches; channery silt loam C—26 to 30 inches; very channery silt loam 2R—30 to 42 inches; unweathered bedrock

Minor Components

Arnot

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 15 percent Hydric soil status: No

Bath

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Oquaga

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

296327—Lordstown extremely stony silt loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Lordstown and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Crest, side slope

Slope: 8 to 25 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 7 inches; channery silt loam Bw—7 to 26 inches; channery silt loam

C—26 to 30 inches; very channery silt loam 2R—30 to 42 inches; unweathered bedrock

Minor Components

Arnot

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 15 percent Hydric soil status: No

Bath

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

Oquaga

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

296328—Lordstown and Oquaga extremely stony soils, 25 to 70 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Lordstown and similar soils: 40 percent Oquaga and similar soils: 35 percent

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Crest, side slope

Slope: 25 to 70 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 7 inches; very channery silt loam Bw—7 to 26 inches; very channery loam C—26 to 30 inches; very channery silt loam 2R—30 to 42 inches; unweathered bedrock

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Side slope

Slope: 25 to 60 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 7 inches; very channery loam Bw—7 to 30 inches; very channery loam R—30 to 42 inches; unweathered bedrock

296329—Mardin channery silt loam, 2 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 45 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Mardin and similar soils: 85 percent Dissimilar minor components: 10 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery silt loam Bw—8 to 17 inches; channery silt loam BE—17 to 21 inches; channery silt loam Bx—21 to 60 inches; channery loam C—60 to 80 inches; channery loam

Minor Components

Volusia

Percent of map unit: 5 percent

Soil Survey of Delaware Water Gap National Recreation Area

Landform: Hills

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave

Across-slope shape: Convex, concave

Hydric soil status: No

Chippewa

Percent of map unit: 3 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Bath

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

296330—Mardin channery silt loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 45 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Mardin and similar soils: 85 percent Dissimilar minor components: 10 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Loamy till

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery silt loam Bw—8 to 17 inches; channery silt loam BE—17 to 21 inches; channery silt loam Bx—21 to 60 inches; channery loam C—60 to 80 inches; channery loam

Minor Components

Volusia

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 18 percent Down-slope shape: Concave

Across-slope shape: Convex, concave

Hydric soil status: No

Bath

Percent of map unit: 3 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Chippewa

Percent of map unit: 2 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

296331—Mardin very stony silt loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 750 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 160 days

Map Unit Composition

Mardin and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast Aspect (range): All aspects

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; very stony silt loam
Bw—8 to 17 inches; channery silt loam
BE—17 to 21 inches; channery silt loam
Bx—21 to 60 inches; channery silt loam
C—60 to 80 inches; very channery silt loam

Minor Components

Lordstown

Percent of map unit: 6 percent

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Volusia

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Chippewa

Percent of map unit: 4 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

296332—Mardin very stony silt loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 750 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 160 days

Map Unit Composition

Mardin and similar soils: 87 percent Dissimilar minor components: 12 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 8 to 25 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till

Soil Survey of Delaware Water Gap National Recreation Area

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A-0 to 8 inches; very stony silt loam Bw-8 to 17 inches; channery silt loam BE—17 to 21 inches; channery silt loam Bx-21 to 60 inches; channery silt loam C-60 to 80 inches; very channery silt loam

Minor Components

Lordstown

Percent of map unit: 8 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Hydric soil status: No

Volusia

Percent of map unit: 3 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

Chippewa

Percent of map unit: 1 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 12 percent Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil status: Yes

296335—Meckesville gravelly loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 2,795 feet

Mean annual precipitation: 34 to 48 inches

Mean annual air temperature: 46 to 55 degrees F

Frost-free period: 130 to 190 days

Map Unit Composition

Meckesville and similar soils: 100 percent

Description of Meckesville Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiudults

Setting

Landform: Mountain valleys

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountain flank

Slope: 8 to 15 percent Down-slope shape: Concave Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Sandstone, siltstone, and shale colluvium derived from sedimentary

rock

Restrictive feature(s): Fragipan at a depth of 25 to 48 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 30 to 48 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 9 inches; gravelly loam 9 to 36 inches; channery loam 36 to 60 inches; channery loam 60 to 64 inches; very channery loam

296337—Meckesville very stony loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 2.795 feet

Mean annual precipitation: 34 to 48 inches Mean annual air temperature: 46 to 55 degrees F

Frost-free period: 130 to 190 days

Map Unit Composition

Meckesville and similar soils: 100 percent

Description of Meckesville Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiudults

Setting

Landform: Mountain valleys

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountain flank

Slope: 8 to 25 percent
Down-slope shape: Concave
Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Sandstone, siltstone, and shale colluvium derived from sedimentary

rock

Restrictive feature(s): Fragipan at a depth of 25 to 48 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 30 to 48 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

0 to 9 inches; gravelly loam 9 to 36 inches; channery loam 36 to 60 inches; channery loam 60 to 64 inches; very channery loam

296338—Morris channery silt loam, 2 to 10 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 120 to 165 days

Map Unit Composition

Morris and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Morris Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts

Setting

Landscape: Glaciated uplands

Landform: Till plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 11 to 22 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 3 to 10 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 6.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery silt loam Bw—8 to 17 inches; channery silt loam Bx—17 to 70 inches; channery silt loam C—70 to 80 inches; channery silt loam

Minor Components

Norwich

Percent of map unit: 20 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

296339—Morris extremely stony silt loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 49.2 to 1,801 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 120 to 180 days

Map Unit Composition

Morris and similar soils: 75 percent Dissimilar minor components: 25 percent

Description of Morris Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts

Setting

Landscape: Glaciated uplands

Landform: Till plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent

Down-slope shape: Concave
Across-slope shape: Concave
Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 11 to 22 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 3 to 10 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; very channery silt loam Bw—8 to 17 inches; very channery silt loam

Bx—17 to 70 inches; gravelly loam C—70 to 80 inches; gravelly loam

Minor Components

Norwich

Percent of map unit: 25 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 5 percent

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil status: Yes

296340—Morris extremely stony silt loam, 8 to 20 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 120 to 165 days

Map Unit Composition

Morris and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Morris Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts

Setting

Landscape: Glaciated uplands

Landform: Till plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 20 percent Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 11 to 22 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 3 to 10 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; very channery silt loam Bw—8 to 17 inches; very channery silt loam

Bx—17 to 70 inches; gravelly loam C—70 to 80 inches; gravelly loam

Minor Components

Norwich

Percent of map unit: 20 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

296341—Mucky peat, deep

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 50 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Freetown, mucky peat, and similar soils: 100 percent

Description of Freetown Mucky Peat

Soil Classification

Dysic, mesic Typic Medisaprists

Setting

Landform: Swamps (fig. 2) Slope: 0 to 2 percent

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Parent material: Highly decomposed organic material Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface to a depth of 6 inches

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 28.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: D

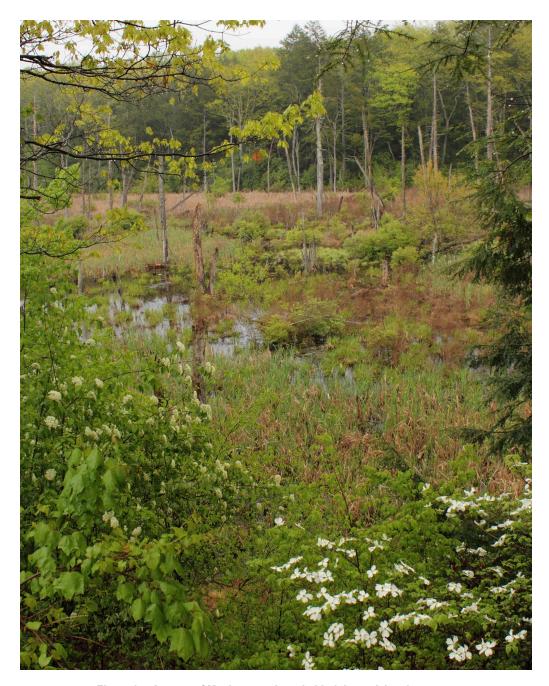


Figure 2.—An area of Mucky peat, deep, behind the park headquarters.

Typical Profile

Oe—0 to 6 inches; mucky peat Oa—6 to 72 inches; muck

296342—Mucky peat, shallow

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 800 to 2,000 feet

Mean annual precipitation: 42 to 47 inches Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Paupack, mucky peat (shallow), and similar soils: 100 percent

Description of Paupack Mucky Peat (Shallow)

Soil Classification

Loamy-skeletal or clayey-skeletal, mixed, dysic, mesic Terric Medisaprists

Setting

Landform: Swamps Slope: 0 to 2 percent

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Parent material: Woody organic material over gravelly alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface to a depth of 6 inches

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 18.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: D

Vegetation

Existing plants: Silky dogwood, tamarack, rhododendron, and highbush blueberry

Typical Profile

Oe—0 to 3 inches; mucky peat Oa1—3 to 26 inches; muck

Oa2—26 to 36 inches; very stony muck

Cg—36 to 70 inches; extremely stony sandy loam

296343—Oquaga-Lackawanna channery loams, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Oquaga and similar soils: 50 percent Lackawanna and similar soils: 35 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Side slope

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 7 inches; very channery loam Bw—7 to 30 inches; very channery loam R—30 to 42 inches; unweathered bedrock

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Settina

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 21 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery loam

296344—Oquaga-Lackawanna channery loams, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Oquaga and similar soils: 55 percent Lackawanna and similar soils: 30 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Side slope

Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 7 inches; very channery loam Bw—7 to 30 inches; very channery loam R—30 to 42 inches; unweathered bedrock

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 21 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery loam

296346—Oquaga-Lackawanna extremely stony loams, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Oquaga and similar soils: 50 percent Lackawanna and similar soils: 35 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Side slope

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 7 inches; very channery loam Bw—7 to 30 inches; very channery loam R—30 to 42 inches; unweathered bedrock

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 21 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; very channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery loam

296347—Oquaga-Lackawanna extremely stony loams, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Oquaga and similar soils: 60 percent Lackawanna and similar soils: 30 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Side slope

Slope: 8 to 25 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 7 inches; very channery loam Bw—7 to 30 inches; very channery loam R—30 to 42 inches; unweathered bedrock

Description of Lackawanna Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Ridges, glaciated hillslopes

Landform position (two-dimensional): Summit, backslope Landform position (three-dimensional): Mountaintop, side slope

Slope: 8 to 25 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 21 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 21 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; very channery loam Bw—8 to 25 inches; channery loam Bx—25 to 60 inches; channery loam

296348—Philo silt loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 2,995 feet

Mean annual precipitation: 30 to 55 inches Mean annual air temperature: 46 to 59 degrees F

Frost-free period: 130 to 187 days

Map Unit Composition

Philo and similar soils: 85 percent

Dissimilar minor components: 10 percent

Description of Philo Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Fluvaquentic Dystrudepts

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Mountainbase

Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy alluvium derived from sandstone and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 48 to 99 inches

Frequency of flooding: Frequent Frequency of ponding: None

Depth to water table: About 18 to 36 inches Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: B

Typical Profile

0 to 10 inches; silt loam

10 to 40 inches; fine sandy loam

40 to 60 inches; gravelly fine sandy loam

Minor Components

Holly

Percent of map unit: 10 percent

Landform: Depressions on flood plains, backswamps Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Hydric soil status: Yes

296349—Pope silt loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 835 feet

Mean annual precipitation: 30 to 51 inches Mean annual air temperature: 40 to 54 degrees F

Frost-free period: 100 to 187 days

Map Unit Composition

Pope and similar soils: 90 percent Dissimilar minor components: 8 percent

Description of Pope Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts

Setting

Landform: Flood plains Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy alluvium derived from sandstone and siltstone

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Occasional Frequency of ponding: None

Depth to water table: About 48 to 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility)

Soil Survey of Delaware Water Gap National Recreation Area

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

0 to 10 inches; silt loam 10 to 30 inches; silt loam

30 to 60 inches; loamy very fine sand

Minor Components

Holly

Percent of map unit: 8 percent

Landform: Depressions on flood plains, backswamps Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Hydric soil status: Yes

296350—Pope silt loam, high bottom

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 835 feet

Mean annual precipitation: 30 to 51 inches Mean annual air temperature: 40 to 54 degrees F

Frost-free period: 100 to 187 days

Map Unit Composition

Pope and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Pope Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts

Setting

Landform: Flood plains
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy alluvium derived from sandstone and siltstone

Soil Survey of Delaware Water Gap National Recreation Area

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: About 48 to 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

0 to 10 inches; silt loam 10 to 30 inches; silt loam

30 to 60 inches; loamy very fine sand

Minor Components

Holly

Percent of map unit: 10 percent

Landform: Depressions on flood plains, backswamps Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Hydric soil status: Yes

296351—Rexford gravelly silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Mean annual precipitation: 34 to 51 inches
Mean annual air temperature: 40 to 50 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Rexford, somewhat poorly drained, and similar soils: 40 percent

Rexford, poorly drained, and similar soils: 35 percent

Description of Rexford, Somewhat Poorly Drained, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts

Setting

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy outwash derived from sandstone and shale

Restrictive feature(s): Fragipan at a depth of 15 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 2 to 10 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 8 inches; silt loam Bw—8 to 18 inches; silt loam Bx—18 to 40 inches; gravelly loam

2C-40 to 63 inches; stratified gravel and very gravelly loam

Description of Rexford, Poorly Drained, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts

Setting

Landform: Depressions Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Parent material: Coarse-loamy outwash derived from sandstone and shale

Restrictive feature(s): Fragipan at a depth of 15 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: C

Typical Profile

Ap-0 to 8 inches; silt loam

Bw—8 to 18 inches; silt loam Bx—18 to 40 inches; gravelly loam

2C-40 to 63 inches; stratified gravel and very gravelly loam

296355—Sheffield silt loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 925 to 1,085 feet

Mean annual precipitation: 34 to 44 inches Mean annual air temperature: 46 to 54 degrees F

Frost-free period: 133 to 182 days

Map Unit Composition

Sheffield and similar soils: 100 percent

Description of Sheffield Soil

Soil Classification

Fine-silty, mixed, mesic Typic Fragiaqualfs

Setting

Landform: Depressions on till plains

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Head slope, base slope, interfluve

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible Parent material: Till

Restrictive feature(s): Fragipan at a depth of 15 to 26 inches; paralithic bedrock at a

depth of 48 to 99 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Depth to water table: At the surface
Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

0 to 7 inches; silt loam

7 to 19 inches; silty clay loam 19 to 38 inches; silty clay loam

38 to 66 inches; very channery silty clay loam

296363—Very stony land and Rock outcrops, steep

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,095 to 2,495 feet

Mean annual precipitation: 36 to 55 inches Mean annual air temperature: 46 to 55 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Dystrochrepts, very stony, and similar soils: 85 percent

Description of Dystrochrepts, Very Stony

Soil Classification

Typic Dystrochrepts

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 25 to 99 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): Lithic bedrock at a depth of 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

0 to 6 inches; very channery loam 6 to 32 inches; very channery loam 32 to 56 inches; extremely channery loam 56 to 60 inches; unweathered bedrock

296369—Wayland silty clay loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 200 to 1,495 feet

Mean annual precipitation: 30 to 40 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Wayland and similar soils: 100 percent

Description of Wayland Soil

Soil Classification

Fine-silty, mixed, active, nonacid, mesic Mollic Fluvaquents

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Talf

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Parent material: Recent alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Frequent Frequency of ponding: Frequent Depth to water table: At the surface Drainage class: Very poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 10.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4w

Hydric soil status: Yes Hydrologic soil group: C/D

Typical Profile

0 to 9 inches; silty clay loam 9 to 41 inches; silty clay loam 41 to 60 inches; very gravelly loam

296376—Wellsboro channery loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains Elevation: 1,095 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Wellsboro and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Wellsboro Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam Bw—8 to 17 inches; channery loam BE—17 to 21 inches; channery loam Bx—21 to 60 inches; channery silt loam C—60 to 80 inches; channery loam

Minor Components

Morris

Percent of map unit: 8 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Norwich

Percent of map unit: 8 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Lackawanna

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

296379—Wellsboro extremely stony loam, 8 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 165 days

Map Unit Composition

Wellsboro and similar soils: 85 percent Dissimilar minor components: 13 percent

Description of Wellsboro Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 8 to 25 percent Down-slope shape: Concave Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery loam
Bw—8 to 17 inches; channery loam
BE—17 to 21 inches; channery loam
Bx—21 to 60 inches; channery silt loam
C—60 to 80 inches; channery loam

Minor Components

Lackawanna

Percent of map unit: 8 percent Aspect (representative): Southeast Aspect (range): All aspects

Slope: 8 to 25 percent Hydric soil status: No

Norwich

Percent of map unit: 3 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 12 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Morris

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent Hydric soil status: No

296385—Wyoming gravelly sandy loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 56 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Wyoming and similar soils: 85 percent Dissimilar minor components: 10 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

0 to 7 inches; gravelly sandy loam 7 to 25 inches; very gravelly sandy loam

25 to 60 inches; extremely gravelly loamy coarse sand

Minor Components

Braceville

Percent of map unit: 5 percent Landform: Outwash terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 2 to 6 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 5 percent Landform: Outwash terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

296386—Wyoming gravelly sandy loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 56 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Wyoming and similar soils: 85 percent Dissimilar minor components: 10 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

0 to 7 inches; gravelly sandy loam 7 to 25 inches; very gravelly sandy loam

25 to 60 inches; extremely gravelly loamy coarse sand

Minor Components

Braceville

Percent of map unit: 5 percent Landform: Outwash terraces

Geomorphic position (two-dimensional): Toeslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 2 to 6 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 5 percent Landform: Outwash terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

296387—Wyoming gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 56 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Wyoming and similar soils: 85 percent Dissimilar minor components: 12 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

0 to 7 inches; gravelly sandy loam 7 to 25 inches; very gravelly sandy loam

25 to 60 inches; extremely gravelly loamy coarse sand

Minor Components

Braceville

Percent of map unit: 7 percent Landform: Outwash terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 2 to 6 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 5 percent Landform: Outwash terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

296388—Wyoming gravelly sandy loam, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Wyoming and similar soils: 85 percent Dissimilar minor components: 5 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 15 to 25 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: A

Typical Profile

0 to 7 inches; gravelly sandy loam 7 to 25 inches; very gravelly sandy loam

25 to 60 inches; extremely gravelly loamy coarse sand

Minor Components

Unadilla

Percent of map unit: 5 percent Landform: Outwash terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

296389—Wyoming gravelly sandy loam, 25 to 70 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 42 to 50 inches Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 110 to 145 days

Map Unit Composition

Wyoming and similar soils: 100 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 25 to 70 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Water-sorted gravelly outwash derived from sandstone, siltstone, and/

or shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: A

Typical Profile

0 to 8 inches; very gravelly sandy loam 8 to 26 inches; very gravelly sandy loam

26 to 60 inches; stratified sand to very gravelly loamy sand

296390 (W)—Water

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 50 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Water: 100 percent

Description of Water

Setting

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Hydric soil status: Unranked

297185—Edgemere-Shohola complex, 3 to 15 percent slopes, very rubbly

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Edgemere and similar soils: 42 percent Shohola and similar soils: 42 percent Dissimilar minor components: 16 percent

Description of Edgemere Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Fragiaquepts

Settina

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Mountainbase, base slope, flat

Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Restrictive feature(s): Fragipan at a depth of 15 to 25 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface to a depth of 6 inches (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Oe—0 to 2 inches; extremely stony mucky peat A/E—2 to 5 inches; extremely stony loam Bg—5 to 24 inches; very stony loam

Bx—24 to 66 inches; very gravelly sandy loam

Description of Shohola Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Aeric Fragiaquepts

Setting

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 3 to 15 percent
Down-slope shape: Concave
Across-slope shape: Concave
Aspect (representative): Southeast
Aspect (range): All aspects

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 18 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; very flaggy loam B—3 to 24 inches; very flaggy loam

Bx—24 to 72 inches; very flaggy fine sandy loam

Minor Components

Mardin

Percent of map unit: 11 percent Aspect (representative): Southeast Aspect (range): All aspects

Slope: 0 to 8 percent Hydric soil status: No

Freetown

Percent of map unit: 5 percent

Landform: Swamps

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 2 percent Hydric soil status: Yes

297186—Edgemere extremely stony loam, 0 to 3 percent slopes, very rubbly

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Edgemere and similar soils: 75 percent Dissimilar minor components: 25 percent

Description of Edgemere Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Fragiaquepts

Settina

Landform: Depressions Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Restrictive feature(s): Fragipan at a depth of 15 to 25 inches

Frequency of flooding: None Frequency of ponding: Occasional

Depth to water table: At the surface to a depth of 6 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Oe—0 to 2 inches; extremely stony mucky peat A/E—2 to 5 inches; extremely stony loam

Bw-5 to 24 inches; very stony loam

C-24 to 66 inches; very gravelly sandy loam

Minor Components

Shohola

Percent of map unit: 10 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Mardin

Percent of map unit: 7 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Freetown

Percent of map unit: 4 percent

Landform: Swamps

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 1 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Wyalusing

Percent of map unit: 4 percent

Landform: Flood plains

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Concave

Hydric soil status: Yes

297188—Manlius-Arnot-Rock outcrop complex, 15 to 30 percent slopes, rubbly

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 51 inches Mean annual air temperature: 40 to 52 degrees F

Frost-free period: 100 to 200 days

Map Unit Composition

Manlius and similar soils: 40 percent Arnot and similar soils: 35 percent

Rock outcrop: 15 percent

Dissimilar minor components: 10 percent

Description of Manlius Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 15 to 30 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Channery till derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 5 inches; very channery silt loam Bw—5 to 24 inches; very channery loam C—24 to 30 inches; extremely channery loam R—30 to 40 inches; unweathered bedrock

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, side slope

Slope: 15 to 30 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None

Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

A—0 to 3 inches; very channery loam Bw—3 to 14 inches; very channery loam 2R—14 to 24 inches; unweathered bedrock

Description of Rock Outcrop

Setting

Slope: 15 to 30 percent

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Restrictive feature(s): Bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups Hydric soil status: No

Minor Components

Mardin

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Rubble land

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

297189—Manlius-Arnot-Rock outcrop complex, 30 to 80 percent slopes, rubbly

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 51 inches Mean annual air temperature: 40 to 52 degrees F

Frost-free period: 100 to 200 days

Map Unit Composition

Manlius and similar soils: 40 percent Arnot and similar soils: 35 percent

Rock outcrop: 15 percent

Dissimilar minor components: 10 percent

Description of Manlius Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 30 to 80 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast Aspect (range): All aspects

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Channery till derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 5 inches; very channery silt loam Bw—5 to 24 inches; very channery loam C—24 to 30 inches; extremely channery loam R—30 to 40 inches; unweathered bedrock

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, side slope

Slope: 30 to 80 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

A—0 to 3 inches; very channery loam Bw—3 to 14 inches; very channery loam 2R—14 to 24 inches; unweathered bedrock

Description of Rock Outcrop

Setting

Slope: 30 to 80 percent

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Restrictive feature(s): Bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups Hydric soil status: No

Minor Components

Mardin

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Rubble land

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

297190—Braceville fine sandy loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 52 degrees F

Frost-free period: 100 to 160 days

Map Unit Composition

Braceville and similar soils: 82 percent Dissimilar minor components: 18 percent

Description of Braceville Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Outwash terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): Fragipan at a depth of 15 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 11 inches; fine sandy loam Bw—11 to 27 inches; fine sandy loam Bx—27 to 48 inches; fine sandy loam C—48 to 70 inches; loamy sand

Minor Components

Wyoming

Percent of map unit: 9 percent Aspect (representative): Southeast

Aspect (range): All aspects

Slope: 0 to 8 percent Hydric soil status: No

Chenango

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Rexford, poorly drained

Percent of map unit: 3 percent Landform: Outwash terraces Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

297191—Wyalusing fine sandy loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 3,500 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 110 to 190 days

Map Unit Composition

Wyalusing and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Wyalusing Soil

Soil Classification

Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic Typic Fluvaquents

Setting

Landform: Flood plains
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Concave
Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy alluvium over sandy and gravelly alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Frequent Frequency of ponding: None

Depth to water table: At the surface to a depth of 6 inches

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

A—0 to 6 inches; fine sandy loam Bg—6 to 31 inches; fine sandy loam

2C-31 to 70 inches; very cobbly loamy sand

Minor Components

Barbour

Percent of map unit: 7 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Craigsville

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 5 percent Hydric soil status: No

Pope

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297192—Pope fine sandy loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 51 inches Mean annual air temperature: 40 to 54 degrees F

Frost-free period: 100 to 180 days

Map Unit Composition

Pope and similar soils: 95 percent Dissimilar minor components: 5 percent

Description of Pope Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts

Setting

Landform: Flood plains

Soil Survey of Delaware Water Gap National Recreation Area

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Riser

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very low

Parent material: Acid alluvium derived from sedimentary rock Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Frequent Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 6 inches; fine sandy loam Bw—6 to 33 inches; fine sandy loam C—33 to 70 inches; sandy loam

Minor Components

Wyalusing

Percent of map unit: 5 percent

Landform: Flood plains

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: Yes

297193—Paupack mucky peat

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 2.000 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Paupack and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Paupack Soil

Soil Classification

Loamy-skeletal or clayey-skeletal, mixed, dysic, mesic Terric Medisaprists

Setting

Landform: Swamps Slope: 0 to 2 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Parent material: Woody organic material over gravelly alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface to a depth of 6 inches

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 18.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: D

Vegetation

Existing plants: Silky dogwood, tamarack, rhododendron, and highbush blueberry

Typical Profile

Oe—0 to 3 inches; mucky peat Oa1—3 to 26 inches; muck

Oa2—26 to 36 inches; very stony muck

Cg—36 to 70 inches; extremely stony sandy loam

Minor Components

Edgemere

Percent of map unit: 8 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Kimbles

Percent of map unit: 2 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 2 percent

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil status: Yes

297196—Freetown mucky peat

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 50 degrees F

Frost-free period: 100 to 200 days

Map Unit Composition

Freetown and similar soils: 94 percent Dissimilar minor components: 6 percent

Description of Freetown Soil

Soil Classification

Dysic, mesic Typic Medisaprists

Setting

Landform: Swamps Slope: 0 to 1 percent

Down-slope shape: Concave
Across-slope shape: Concave
Aspect (representative): Southeast
Aspect (range): All aspects

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Parent material: Highly decomposed organic material Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface to a depth of 6 inches

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 28.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Oe—0 to 6 inches; mucky peat Oa—6 to 72 inches; muck

Minor Components

Gleneyre

Percent of map unit: 6 percent Landform: Relict lakebeds

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 1 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

297197—Manlius very channery silt loam, 3 to 8 percent slopes, very bouldery

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Manlius and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Manlius Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Side slope, interfluve

Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Channery till derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 3.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 5 inches; very channery silt loam Bw—5 to 24 inches; very channery loam C—24 to 30 inches; extremely channery loam R—30 to 40 inches; unweathered bedrock

Minor Components

Mardin

Percent of map unit: 7 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Edgemere

Percent of map unit: 3 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

297198—Manlius very channery silt loam, 8 to 15 percent slopes, very bouldery

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Manlius and similar soils: 86 percent Dissimilar minor components: 14 percent

Description of Manlius Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Side slope

Slope: 8 to 15 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Channery till derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 3.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 5 inches; very channery silt loam Bw—5 to 24 inches; very channery loam C—24 to 30 inches; extremely channery loam R—30 to 40 inches; unweathered bedrock

Minor Components

Mardin

Percent of map unit: 10 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Edgemere

Percent of map unit: 2 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 10 percent Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Rock outcrop

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

297201—Oquaga very stony loam, 15 to 30 percent slopes, extremely bouldery

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Oquaga and similar soils: 75 percent Dissimilar minor components: 20 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Glaciated uplands

Landform: Hillslopes

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Side slope

Slope: 15 to 30 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Reddish ablation till derived from sandstone and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 2 inches; very channery loam Bw—2 to 26 inches; very stony loam

C—26 to 32 inches; extremely stony sandy loam

R-32 to 42 inches; unweathered bedrock

Minor Components

Wellsboro

Percent of map unit: 7 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Hydric soil status: No

Rock outcrop

Percent of map unit: 6 percent

Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

Lackawanna

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Shohola

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

297203—Delaware fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,095 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Delaware and similar soils: 93 percent Dissimilar minor components: 7 percent

Description of Delaware Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys

Landform: Low to middle river terraces

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very low

Parent material: Postglacial alluvium derived from sandstone and shale Restrictive feature(s): Lithic bedrock at a depth of 72 to 99 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Soil Survey of Delaware Water Gap National Recreation Area

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 9.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 14 inches; fine sandy loam Bw—14 to 48 inches; fine sandy loam C—48 to 72 inches; fine sandy loam

Minor Components

Pope

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Chenango

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Barbour

Percent of map unit: 1 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297204—Delaware fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,095 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Delaware and similar soils: 82 percent Dissimilar minor components: 18 percent

Description of Delaware Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys

Landform: Low to middle river terraces

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Tread

Slope: 3 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Postglacial alluvium derived from sandstone and shale Restrictive feature(s): Lithic bedrock at a depth of 72 to 99 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 9.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 14 inches; fine sandy loam Bw—14 to 48 inches; fine sandy loam C—48 to 72 inches; fine sandy loam

Minor Components

Chenango

Percent of map unit: 9 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Pope

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Barbour

Percent of map unit: 3 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297205—Delaware fine sandy loam, 8 to 20 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,095 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Delaware and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Delaware Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys

Landform: Low to middle river terraces

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Tread

Slope: 8 to 20 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Postglacial alluvium derived from sandstone and shale Restrictive feature(s): Lithic bedrock at a depth of 72 to 99 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 9.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 14 inches; fine sandy loam Bw—14 to 48 inches; fine sandy loam C—48 to 72 inches; fine sandy loam

Minor Components

Pope

Percent of map unit: 8 percent

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Barbour

Percent of map unit: 7 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Chenango

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

297209—Philo Ioam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,400 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Philo and similar soils: 85 percent Dissimilar minor components: 12 percent

Description of Philo Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Fluvaquentic Dystrudepts

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Mountainbase

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy alluvium derived from sandstone and siltstone

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Frequent Frequency of ponding: None

Depth to water table: About 18 to 36 inches

Soil Survey of Delaware Water Gap National Recreation Area

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: B

Vegetation

Existing plants: Red maple, American hornbeam, sedge, white ash, and hollyfern

Typical Profile

Ap-0 to 6 inches; loam

Bw—6 to 36 inches; fine sandy loam

C—36 to 70 inches; stratified sand to very gravelly sandy loam

Minor Components

Barbour

Percent of map unit: 8 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Chenango

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Wyalusing

Percent of map unit: 2 percent

Landform: Flood plains

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

297210—Barbour fine sandy loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,400 feet

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 57 degrees F

Frost-free period: 100 to 200 days

Map Unit Composition

Barbour and similar soils: 85 percent Dissimilar minor components: 14 percent

Description of Barbour Soil

Soil Classification

Coarse-loamy over sandy or sandy-skeletal, mixed, active, mesic Fluventic Dystrudepts

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Occasional Frequency of ponding: None

Depth to water table: About 36 to 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 10 inches; fine sandy loam Bw—10 to 38 inches; fine sandy loam 2C—38 to 72 inches; very cobbly sand

Minor Components

Pope

Percent of map unit: 7 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Philo

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Delaware

Percent of map unit: 3 percent

Landform: Low to middle river terraces

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

297216—Wurtsboro stony fine sandy loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 52 degrees F

Frost-free period: 100 to 180 days

Map Unit Composition

Wurtsboro and similar soils: 92 percent Dissimilar minor components: 8 percent

Description of Wurtsboro Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Glaciated uplands

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear

Aspect (representative): Southeast Aspect (range): All aspects

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 12 to 27 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 4 inches; stony fine sandy loam Bw—4 to 22 inches; gravelly fine sandy loam Bx—22 to 70 inches; gravelly fine sandy loam

Minor Components

Edgemere

Percent of map unit: 3 percent Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Shohola

Percent of map unit: 3 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Oquaga

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

297217—Wurtsboro stony fine sandy loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 34 to 51 inches Mean annual air temperature: 40 to 52 degrees F

Frost-free period: 100 to 180 days

Map Unit Composition

Wurtsboro and similar soils: 88 percent Dissimilar minor components: 12 percent

Description of Wurtsboro Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Glaciated uplands

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 12 to 27 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 4 inches; stony fine sandy loam Bw—4 to 22 inches; gravelly fine sandy loam Bx—22 to 70 inches; gravelly fine sandy loam

Minor Components

Oquaga

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Rock outcrop

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

Edgemere

Percent of map unit: 1 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 10 percent Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Shohola

Percent of map unit: 1 percent Aspect (representative): Southeast

Aspect (range): All aspects

Slope: 8 to 15 percent Hydric soil status: No

297227—Arnot very channery loam, 3 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Arnot and similar soils: 88 percent Dissimilar minor components: 11 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, side slope

Slope: 3 to 15 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast Aspect (range): All aspects

Properties and Qualities

Soil temperature regime: Mesic

Runoff: Medium

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

A—0 to 3 inches; very channery loam Bw—3 to 10 inches; very channery loam C—10 to 14 inches; extremely channery loam 2R—14 to 24 inches; unweathered bedrock

Minor Components

Rock outcrop

Percent of map unit: 6 percent Aspect (representative): Southeast Aspect (range): All aspects Hydric soil status: No

_ __

Mardin

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Lackawanna

Percent of map unit: 1 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

297228—Arnot very channery loam, 15 to 35 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Arnot and similar soils: 85 percent
Dissimilar minor components: 15 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, side slope

Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic Properties and Qualities

Runoff: High

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

A—0 to 3 inches; very channery loam Bw—3 to 10 inches; very channery loam C—10 to 14 inches; extremely channery loam 2R—14 to 24 inches; unweathered bedrock

Minor Components

Rock outcrop

Percent of map unit: 8 percent Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

Mardin

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Swartswood

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 30 percent Hydric soil status: No

297229—Wyoming very cobbly sandy loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Wyoming and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

Ap—0 to 3 inches; very cobbly sandy loam Bw—3 to 33 inches; very cobbly fine sandy loam

C-33 to 72 inches; extremely cobbly loamy coarse sand

Minor Components

Delaware

Percent of map unit: 6 percent

Landform: Low to middle river terraces

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Braceville

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Suncook

Percent of map unit: 2 percent

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297230—Wyoming very cobbly sandy loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Wyoming and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

Ap—0 to 3 inches; very cobbly sandy loam Bw—3 to 33 inches; very cobbly fine sandy loam

C—33 to 72 inches; extremely cobbly loamy coarse sand

Minor Components

Delaware

Percent of map unit: 6 percent

Landform: Low to middle river terraces

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Braceville

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Suncook

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297231—Wyoming very cobbly sandy loam, 15 to 30 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Wyoming and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 15 to 30 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Soil Survey of Delaware Water Gap National Recreation Area

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: A

Typical Profile

A—0 to 3 inches; very cobbly sandy loam Bw—3 to 33 inches; very cobbly fine sandy loam

C-33 to 72 inches; extremely cobbly loamy coarse sand

Minor Components

Suncook

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Delaware

Percent of map unit: 3 percent

Landform: Low to middle river terraces

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Braceville

Percent of map unit: 1 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297236—Suncook loamy sand, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 51 inches Mean annual air temperature: 40 to 54 degrees F

Frost-free period: 100 to 180 days

Map Unit Composition

Suncook and similar soils: 91 percent Dissimilar minor components: 4 percent

Description of Suncook Soil

Soil Classification

Mixed, mesic Typic Udipsamments

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very low

Parent material: Sandy glaciofluvial deposits derived from sandstone

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Occasional Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: A

Vegetation

Existing plants: Striped prince's pine, groundcedar, northern bayberry, hairy moss, and lowbush blueberry

Typical Profile

A—0 to 10 inches; loamy sand C—10 to 70 inches; sand

Minor Components

Wyalusing

Percent of map unit: 4 percent

Landform: Flood plains

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: Yes

297237—Mardin channery silt loam, 0 to 8 percent slopes, stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Mardin and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery silt loam Bw—8 to 17 inches; channery loam BE—17 to 21 inches; channery loam Bx1—21 to 30 inches; channery loam Bx2—30 to 60 inches; very channery loam Cd—60 to 80 inches; very channery loam

Minor Components

Manlius

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Oquaga

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Edgemere

Percent of map unit: 3 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Shohola

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

297238—Mardin channery silt loam, 8 to 15 percent slopes, stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Mardin and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Loamy till

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; channery silt loam Bw—8 to 17 inches; channery loam BE—17 to 21 inches; channery loam Bx1—21 to 30 inches; channery loam Bx2—30 to 60 inches; very channery loam Cd—60 to 80 inches; very channery loam

Minor Components

Manlius

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Oquaga

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Edgemere

Percent of map unit: 3 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 10 percent Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Shohola

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

297239—Mardin stony loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Mardin and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A/E—0 to 8 inches; stony loam
Bw—8 to 17 inches; channery loam
BE—17 to 21 inches; channery loam
Bx1—21 to 30 inches; channery loam
Bx2—30 to 60 inches; very channery loam
Cd—60 to 80 inches; very channery loam

Minor Components

Manlius

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Hydric soil status: No

Oquaga

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

Edgemere

Percent of map unit: 3 percent

Landform: Depressions

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Shohola

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

297240—Mardin stony loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Mardin and similar soils: 85 percent Dissimilar minor components: 14 percent

Description of Mardin Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: High

Parent material: Loamy till

Restrictive feature(s): Fragipan at a depth of 14 to 26 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 11 to 22 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A/E—0 to 8 inches; stony loam
Bw—8 to 17 inches; channery loam
BE—17 to 21 inches; channery loam
Bx1—21 to 30 inches; channery loam
Bx2—30 to 60 inches; very channery loam
Cd—60 to 80 inches; very channery loam

Minor Components

Manlius

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Oquaga

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

Edgemere

Percent of map unit: 3 percent Landform: Depressions Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 10 percent Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Shohola

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

297241—Unadilla silt loam

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 895 feet

Mean annual precipitation: 42 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 145 days

Map Unit Composition

Unadilla and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Unadilla Soil

Soil Classification

Coarse-silty, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Outwash terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Outwash

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 14.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Vegetation

Existing plants: Red maple, buttercup, currant, black raspberry, and summer grape

Typical Profile

Ap—0 to 13 inches; silt loam Bw—13 to 49 inches; silt loam C—49 to 80 inches; silt loam

Minor Components

Braceville

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Suncook

Percent of map unit: 4 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297242—Shohola-Edgemere complex, 0 to 8 percent slopes, very rubbly

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Shohola and similar soils: 62 percent Edgemere and similar soils: 29 percent Dissimilar minor components: 9 percent

Description of Shohola Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Aeric Fragiaquepts

Setting

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 18 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; extremely flaggy loam B—3 to 24 inches; very flaggy loam

Bx—24 to 72 inches; very gravelly fine sandy loam

Description of Edgemere Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Fragiaquepts

Setting

Landform: Depressions Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Restrictive feature(s): Fragipan at a depth of 15 to 25 inches

Frequency of flooding: None Frequency of ponding: Occasional

Depth to water table: At the surface to a depth of 6 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

O—0 to 2 inches; extremely stony mucky peat A/E—2 to 5 inches; extremely stony loam Bg—5 to 24 inches; very stony sandy loam Bx—24 to 66 inches; very gravelly sandy loam

Minor Components

Mardin

Percent of map unit: 9 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

297243—Shohola-Edgemere complex, 8 to 15 percent slopes, very rubbly

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Shohola and similar soils: 62 percent Edgemere and similar soils: 29 percent Dissimilar minor components: 9 percent

Description of Shohola Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Aeric Fragiaquepts

Setting

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 8 to 15 percent Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very high

Restrictive feature(s): Fragipan at a depth of 18 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; extremely flaggy loam B—3 to 24 inches; very flaggy loam

Bx—24 to 72 inches; very gravelly fine sandy loam

Description of Edgemere Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Fragiaquepts

Setting

Landform: Depressions
Slope: 8 to 15 percent
Down-slope shape: Concave
Across-slope shape: Concave
Aspect (representative): Southeast
Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Negligible

Restrictive feature(s): Fragipan at a depth of 15 to 25 inches

Frequency of flooding: None Frequency of ponding: Occasional

Depth to water table: At the surface to a depth of 6 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

O—0 to 2 inches; extremely stony mucky peat A/E—2 to 5 inches; extremely stony loam Bg—5 to 24 inches; very stony sandy loam Bx—24 to 66 inches; very gravelly sandy loam

Minor Components

Mardin

Percent of map unit: 9 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Hydric soil status: No

297244—Lordstown-Swartswood complex, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 1,800 feet

Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Lordstown and similar soils: 40 percent Swartswood and similar soils: 35 percent Dissimilar minor components: 25 percent

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Crest, side slope

Slope: 0 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; very channery loam Bw—3 to 28 inches; gravelly fine sandy loam C—28 to 30 inches; gravelly sandy loam 2R—30 to 40 inches; unweathered bedrock

Description of Swartswood Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Uplands Landform: Hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope

Slope: 0 to 8 percent

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 28 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 26 to 35 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 4 inches; stony fine sandy loam
Bw—4 to 32 inches; channery fine sandy loam
Bx—32 to 70 inches; very gravelly fine sandy loam

Minor Components

Arnot

Percent of map unit: 10 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 15 percent Hydric soil status: No

Rock outcrop

Percent of map unit: 10 percent Aspect (representative): Southeast

Aspect (range): All aspects Hydric soil status: No

Shohola

Percent of map unit: 5 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Hydric soil status: No

297247—Chenango gravelly fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,400 feet

Mean annual precipitation: 35 to 50 inches

Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Chenango and similar soils: 86 percent Dissimilar minor components: 14 percent

Description of Chenango Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landform: Glacial outwash terraces

Landform position (three-dimensional): Riser

Slope: 0 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

Ap—0 to 10 inches; gravelly fine sandy loam Bw—10 to 29 inches; very gravelly fine sandy loam

2C-29 to 70 inches; extremely gravelly loamy coarse sand

Minor Components

Delaware

Percent of map unit: 7 percent

Landform: Low to middle river terraces

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects

Slope: 3 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Braceville

Percent of map unit: 3 percent Aspect (representative): Southeast Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Philo

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Unadilla

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297248—Chenango gravelly fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,095 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Chenango and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Chenango Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landform: Glacial outwash terraces

Landform position (three-dimensional): Riser

Slope: 8 to 15 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility)

Soil Survey of Delaware Water Gap National Recreation Area

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: A

Typical Profile

Ap—0 to 10 inches; gravelly fine sandy loam Bw—10 to 29 inches; very gravelly fine sandy loam

2C-29 to 70 inches; extremely gravelly loamy coarse sand

Minor Components

Delaware

Percent of map unit: 9 percent

Landform: Low to middle river terraces

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Unadilla

Percent of map unit: 6 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297249—Chenango gravelly fine sandy loam, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,095 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 52 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Chenango and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Chenango Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landform: Glacial outwash terraces

Landform position (three-dimensional): Riser

Slope: 15 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Medium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: A

Typical Profile

Ap—0 to 10 inches; gravelly fine sandy loam Bw—10 to 29 inches; very gravelly fine sandy loam

2C-29 to 70 inches; extremely gravelly loamy coarse sand

Minor Components

Delaware

Percent of map unit: 8 percent

Landform: Low to middle river terraces

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Unadilla

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297253—Craigsville-Wyoming complex, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 3,500 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 190 days

Map Unit Composition

Craigsville and similar soils: 50 percent Wyoming and similar soils: 40 percent Dissimilar minor components: 10 percent

Description of Craigsville Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts

Setting

Landscape: Mountains Landform: Flood plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 5 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Occasional Frequency of ponding: None

Depth to water table: About 36 to 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: B

Vegetation

Existing plants: Flowering dogwood, mountain laurel, sweetgum, tuliptree, shortleaf pine, eastern white pine, white oak, northern red oak, and coralberry

Typical Profile

A-0 to 5 inches; very gravelly loam

Bw—5 to 27 inches; very gravelly sandy loam C—27 to 77 inches; extremely cobbly loamy sand

Description of Wyoming Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Riser

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Properties and Qualities

Runoff: Very low

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

A—0 to 3 inches; very cobbly sandy loam

Bw—3 to 33 inches; very cobbly fine sandy loam

C—33 to 72 inches; extremely cobbly loamy coarse sand

Minor Components

Wyalusing

Percent of map unit: 6 percent

Landform: Flood plains

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Concave

Hydric soil status: Yes

Philo

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

Pope

Percent of map unit: 2 percent Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Hydric soil status: No

297254—Pits, shale, and gravel

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Mean annual precipitation: 36 to 46 inches Mean annual air temperature: 46 to 56 degrees F

Frost-free period: 135 to 170 days

Map Unit Composition

Pits, shale: 40 percent Pits, gravel: 40 percent

Description of Pits, Shale

Setting

Slope: 0 to 40 percent

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Runoff: Medium

Restrictive feature(s): Lithic bedrock at the surface to a depth of 2 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8e

Hydric soil status: No Hydrologic soil group: D

Typical Profile

C—0 to 1 inch; channers R—1 to 2 inches; bedrock

Description of Pits, Gravel

Setting

Slope: 0 to 40 percent

Aspect (representative): Southeast

Aspect (range): All aspects

Properties and Qualities

Runoff: Medium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8e

Hydric soil status: No Hydrologic soil group: A

298049—Wurtsboro loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains Landform: Ground moraines Slope: 0 to 8 percent

Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A-2 to 3 inches; loam

E—3 to 5 inches; fine sandy loam Bhs—5 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam Bx1—24 to 30 inches; gravelly sandy loam Bx2—30 to 60 inches; gravelly sandy loam

Minor Components

Swartswood, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298050—Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,100 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 60 percent Swartswood, extremely stony, and similar soils: 40 percent

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; fine sandy loam E—3 to 4 inches; fine sandy loam Bhs—4 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam Bx1—24 to 33 inches; gravelly sandy loam Bx2—33 to 60 inches; gravelly sandy loam

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains Landform: Ground moraines Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

298051—Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,100 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 60 percent Swartswood, extremely stony, and similar soils: 40 percent

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; fine sandy loam E—3 to 4 inches; fine sandy loam Bhs—4 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam Bx1—24 to 33 inches; gravelly sandy loam Bx2—33 to 60 inches; gravelly sandy loam

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

298075—Colonie loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Colonie and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Colonie Soil

Soil Classification

Mixed, mesic Lamellic Udipsamments

Setting

Landscape: River valleys
Landform: Outer terraces
Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial sandy alluvium, sandy eolian deposits, and/or glaciofluvial

deposits

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

A—0 to 2 inches; loamy fine sand Ap—2 to 11 inches; loamy fine sand

E—11 to 24 inches; fine sand

E and Bt1—24 to 40 inches; fine sand E and Bt2—40 to 62 inches; fine sand

Minor Components

Delaware

Percent of map unit: 10 percent Landform: Outer terraces Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 10 percent Landform: Outer terraces Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

298188—Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lackawanna, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Lackawanna, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Wellsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Oquaga, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

298189—Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lackawanna, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Lackawanna, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains Landform: Ground moraines Slope: 8 to 15 percent Down-slope shape: Linear

Soil Survey of Delaware Water Gap National Recreation Area

Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Wellsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Oquaga, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

298221—Swartswood loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Settina

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Copyex

Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

Minor Components

Wurtsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298222—Swartswood loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

Minor Components

Wurtsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298223—Swartswood loam, 15 to 35 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains Landform: Ground moraines Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

Minor Components

Arnot, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298255—Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Delaware, rarely flooded, and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Delaware, Rarely Flooded, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys
Landform: Terraces
Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial coarse-loamy alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.2 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap1—1 to 4 inches; fine sandy loam Ap2—4 to 11 inches; fine sandy loam Bw1—11 to 20 inches; fine sandy loam Bw2—20 to 33 inches; fine sandy loam BC—33 to 41 inches; fine sandy loam C1—41 to 56 inches; fine sandy loam

C2-56 to 60 inches; loam

Minor Components

Colonie

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

298256—Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Delaware, rarely flooded, and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Delaware, Rarely Flooded, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys
Landform: Terraces
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Postglacial coarse-loamy alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.2 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

Ap1—1 to 4 inches; fine sandy loam Ap2—4 to 11 inches; fine sandy loam Bw1—11 to 20 inches; fine sandy loam Bw2—20 to 33 inches; fine sandy loam BC—33 to 41 inches; fine sandy loam C1—41 to 56 inches; fine sandy loam

C2-56 to 60 inches; loam

Minor Components

Colonie

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

298257—Wallpack silt loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Wallpack Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1-0 to 3 inches; silt loam

Ap2—3 to 9 inches; gravelly silt loam Bt—9 to 16 inches; gravelly silt loam Btx1—16 to 25 inches; gravelly silt loam Btx2—25 to 65 inches; very gravelly silt loam

Minor Components

Cambridge

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298258—Wallpack silt loam, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Wallpack Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 15 to 25 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1—0 to 3 inches; silt loam

Ap2—3 to 9 inches; gravelly silt loam Bt—9 to 16 inches; gravelly silt loam Btx1—16 to 25 inches; gravelly silt loam Btx2—25 to 65 inches; very gravelly silt loam

Minor Components

Cambridge

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 25 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 25 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298259—Wallpack silt loam, 3 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wallpack, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Soil Survey of Delaware Water Gap National Recreation Area

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; gravelly silt loam
AB—2 to 5 inches; gravelly silt loam
Bt—5 to 18 inches; gravelly silt loam
Btx—18 to 24 inches; gravelly loam
BCtx1—24 to 42 inches; gravelly silt loam
BCtx2—42 to 60 inches; gravelly loam

Minor Components

Cambridge, extremely stony

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown, extremely stony

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298260—Wallpack silt loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wallpack, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; gravelly silt loam
AB—2 to 5 inches; gravelly silt loam
Bt—5 to 18 inches; gravelly silt loam
Btx—18 to 24 inches; gravelly loam
BCtx1—24 to 42 inches; gravelly silt loam
BCtx2—42 to 60 inches; gravelly loam

Minor Components

Cambridge, extremely stony

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown, extremely stony

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects

Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298261—Wallpack silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Wallpack Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1—0 to 3 inches; silt loam

Ap2—3 to 9 inches; gravelly silt loam Bt—9 to 16 inches; gravelly silt loam

Btx1—16 to 25 inches; gravelly silt loam Btx2—25 to 65 inches; very gravelly silt loam

Minor Components

Cambridge

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298262—Wallpack silt loam, 15 to 35 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wallpack, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; gravelly silt loam
AB—2 to 5 inches; gravelly silt loam
Bt—5 to 18 inches; gravelly silt loam
Btx—18 to 24 inches; gravelly loam
BCtx1—24 to 42 inches; gravelly silt loam
BCtx2—42 to 60 inches; gravelly loam

Minor Components

Cambridge, extremely stony

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown, extremely stony

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298265—Venango silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,000 feet

Mean annual precipitation: 30 to 64 inches

Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Venango, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Venango, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, mesic Aeric Fragiaqualfs

Setting

Landscape: Drumlin fields
Landform: Drumlins
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Aquic

Properties and Qualities

Runoff: Very high

Parent material: Fine-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 14 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; silt loam Bw—6 to 16 inches; silt loam

Btx1—16 to 22 inches; gravelly silty clay loam Btx2—22 to 34 inches; gravelly silty clay loam Btx3—34 to 60 inches; gravelly silty clay loam

Minor Components

Chippewa, extremely stony

Percent of map unit: 10 percent

Landform: Interdrumlins
Aspect (representative): North
Aspect (range): All aspects
Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil status: Yes

298266—Venango silt loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,000 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Venango, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Venango, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, mesic Aeric Fragiaqualfs

Setting

Landscape: Drumlin fields
Landform: Drumlins
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Aquic

Properties and Qualities

Runoff: Very high

Parent material: Fine-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 14 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; silt loam Bw—6 to 16 inches; silt loam

Btx1—16 to 22 inches; gravelly silty clay loam Btx2—22 to 34 inches; gravelly silty clay loam Btx3—34 to 60 inches; gravelly silty clay loam

Minor Components

Nassau, extremely stony

Percent of map unit: 10 percent

Landform: Drumlins

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

Manlius, extremely stony

Percent of map unit: 5 percent

Landform: Drumlins

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

298409—Swartswood loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 8 percent

Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone

Soil Survey of Delaware Water Gap National Recreation Area

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

Minor Components

Wurtsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298411—Swartswood loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

Minor Components

Wurtsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

298413—Swartswood loam, 15 to 35 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

Minor Components

Arnot, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lordstown, extremely stony
Percent of map unit: 5 percent
Landform: Ground moraines
Aspect (representative): North
Aspect (range): All aspects
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil status: No

318498—Hazen-Hoosic complex, 3 to 8 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Hazen, very stony, and similar soils: 60 percent Hoosic, very stony, and similar soils: 35 percent Dissimilar minor components: 5 percent

Description of Hazen, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Mollic Hapludalfs

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy glaciofluvial deposits derived from limestone,

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

Ap—1 to 10 inches; loam

Bt—10 to 18 inches; sandy loam

2C1—18 to 29 inches; very stony loamy coarse sand 2C2—29 to 41 inches; very gravelly coarse sand 2C3—41 to 60 inches; extremely gravelly coarse sand

Description of Hoosic, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Humic Dystrudepts

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap—1 to 9 inches; gravelly loam

Bw—9 to 21 inches; very gravelly coarse sandy loam

2C1—21 to 27 inches; extremely gravelly loamy coarse sand

2C2-27 to 37 inches; extremely gravelly coarse sand

2C3—37 to 49 inches; extremely gravelly coarse sand

2C4-49 to 60 inches; extremely gravelly coarse sand

Minor Components

Otisville, very stony

Percent of map unit: 5 percent Landform: Valley trains Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

318533—Hazen-Hoosic complex, 0 to 3 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Hazen, very stony, and similar soils: 50 percent Hoosic, very stony, and similar soils: 40 percent Dissimilar minor components: 10 percent

Description of Hazen, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Mollic Hapludalfs

Setting

Landscape: Outwash plains Landform: Valley trains Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Coarse-loamy glaciofluvial deposits derived from limestone,

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

Ap—1 to 10 inches; loam Bt—10 to 18 inches; sandy loam

2C1—18 to 29 inches; very stony loamy coarse sand 2C2—29 to 41 inches; very gravelly coarse sand 2C3—41 to 60 inches; extremely gravelly coarse sand

Description of Hoosic, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Humic Dystrudepts

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap-1 to 9 inches; gravelly loam

Bw-9 to 21 inches; very gravelly coarse sandy loam

2C1—21 to 27 inches; extremely gravelly loamy coarse sand

2C2-27 to 37 inches; extremely gravelly coarse sand

2C3—37 to 49 inches; extremely gravelly coarse sand

2C4—49 to 60 inches; extremely gravelly coarse sand

Minor Components

Hero, very stony

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

319783—Catden mucky peat, 0 to 2 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Catden and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Catden Soil

Soil Classification

Euic, mesic Typic Haplosaprists

Setting

Landscape: Till plains Landform: Depressions Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Very low

Parent material: Herbaceous and/or woody organic material Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 26.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

Oe—0 to 2 inches; mucky peat Oa1—2 to 13 inches; muck

Oa2—13 to 20 inches; woody muck

Oa3—20 to 32 inches; muck Oa4—32 to 60 inches; muck

Minor Components

Alden

Percent of map unit: 13 percent Landform: Depressions Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Wallkill

Percent of map unit: 2 percent Landform: Flood plains Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Concave

Down-slope shape: Concave Across-slope shape: Linear Hydric soil status: Yes

319784—Fredon-Halsey complex, 0 to 3 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Fredon, very stony, and similar soils: 50 percent Halsey, very stony, and similar soils: 40 percent Dissimilar minor components: 10 percent

Description of Fredon, Very Stony, Soil

Soil Classification

Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic Aeric Endoaquepts

Setting

Landscape: Outwash plains Landform: Drainageways Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone, sandstone, and shale

Restrictive feature(s): Strongly contrasting textural stratification at a depth of 22 to 40

inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; silt loam Bw1—8 to 14 inches; silt loam Bw2—14 to 18 inches; loam Bw3—18 to 23 inches; loam

2C1—23 to 31 inches; extremely gravelly loamy coarse sand

2C2—31 to 36 inches; extremely gravelly coarse sand 2C3—36 to 45 inches; very gravelly coarse sand

2C4—45 to 55 inches; extremely gravelly coarse sand

2C5—55 to 60 inches; very gravelly coarse sand

Description of Halsey, Very Stony, Soil

Soil Classification

Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic Typic Humaquepts

Setting

Landscape: Outwash plains Landform: Drainageways Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone, sandstone, and shale

Restrictive feature(s): Strongly contrasting textural stratification at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 5 inches; silt loam A2—5 to 11 inches; silt loam Bg—11 to 20 inches; silt loam 2Cg1—20 to 25 inches; loamy sand

2Cg2—25 to 35 inches; very gravelly coarse sand 2Cg3—35 to 49 inches; very gravelly coarse sand 2Cg4—49 to 56 inches; extremely gravelly coarse sand 2Cg5—56 to 60 inches; extremely gravelly coarse sand

Minor Components

Hero, very stony

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

543222—Andover-Buchanan gravelly loams, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 3,795 feet

Mean annual precipitation: 34 to 55 inches Mean annual air temperature: 46 to 57 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Andover, extremely stony, and similar soils: 55 percent Buchanan, extremely stony, and similar soils: 40 percent

Dissimilar minor components: 5 percent

Description of Andover, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquults

Setting

Landscape: Colluvial valleys

Landform: Sandstone and shale hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Brown fine-loamy colluvium derived from sandstone and siltstone Restrictive feature(s): Fragipan at a depth of 16 to 28 inches; lithic bedrock at a depth

of 72 to 99 inches
Frequency of flooding: None
Frequency of ponding: None

Depth to water table: At the surface to a depth of 6 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

A-0 to 8 inches; gravelly loam

Btg—8 to 17 inches; gravelly clay loam Btx—17 to 53 inches; gravelly clay loam C—53 to 65 inches; very gravelly loam

Description of Buchanan, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults

Setting

Landscape: Colluvial valleys

Landform: Sandstone and shale hillslopes Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Colluvium derived from sandstone and shale

Soil Survey of Delaware Water Gap National Recreation Area

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches; lithic bedrock at a depth

of 60 to 99 inches
Frequency of flooding: None
Frequency of ponding: None

Depth to water table: About 17 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Sedge, woodfern, New York fern, and lowbush blueberry

Typical Profile

Ap—0 to 6 inches; gravelly loam Bt—6 to 23 inches; gravelly loam Bx—23 to 47 inches; gravelly loam C—47 to 61 inches; gravelly loam

Minor Components

Laidig

Percent of map unit: 3 percent

Landform: Sandstone, conglomerate, quartzite, and shale colluvial mountain slopes

Geomorphic position (two-dimensional): Summit Geomorphic position (three-dimensional): Mountaintop

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Hazleton

Percent of map unit: 2 percent

Landform: Gray and red sandstone mountain slopes

Geomorphic position (two-dimensional): Shoulder, backslope

Geomorphic position (three-dimensional): Upper third of mountain flank

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

543243—Berks-Weikert complex, 25 to 60 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 295 to 1,600 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 120 to 214 days

Map Unit Composition

Berks and similar soils: 65 percent Weikert and similar soils: 25 percent Dissimilar minor components: 9 percent

Description of Berks Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valleys and ridges

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 25 to 60 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Acid brown residuum weathered from shale and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A-0 to 10 inches; channery loam

Bw—10 to 26 inches; very channery silt loam C—26 to 33 inches; extremely channery loam

R-33 to 43 inches; bedrock

Description of Weikert Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Valleys Landform: Shale hillslopes

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Slope: 25 to 60 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Acid brown residuum weathered from shale and siltstone

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A-0 to 8 inches; channery silt loam

Bw—8 to 15 inches; very channery silt loam C—15 to 18 inches; extremely channery silt loam

R—18 to 20 inches; bedrock

Minor Components

Bedington

Percent of map unit: 4 percent Landform: Shale hillslopes

Geomorphic position (two-dimensional): Summit Geomorphic position (three-dimensional): Interfluve

Aspect (representative): South Aspect (range): All aspects Slope: 8 to 15 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Comly

Percent of map unit: 3 percent

Landform: Shale hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

Brinkerton

Percent of map unit: 2 percent

Landform: Depressions

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Head slope

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

543246—Buchanan gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 3,795 feet

Mean annual precipitation: 34 to 60 inches Mean annual air temperature: 46 to 59 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Buchanan and similar soils: 75 percent Dissimilar minor components: 25 percent

Description of Buchanan Soil

Soil Classification

Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults

Setting

Landform: Valley sides and mountain slopes Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountain flank

Slope: 3 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Colluvium derived from sandstone and shale

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches; lithic bedrock at a depth

of 60 to 99 inches
Frequency of flooding: None
Frequency of ponding: None

Depth to water table: About 14 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 7 inches; gravelly loam Bt—7 to 21 inches; gravelly loam Btx—21 to 65 inches; cobbly clay loam

Minor Components

Andover

Percent of map unit: 10 percent

Landform: Depressions

Geomorphic position (two-dimensional): Footslope, toeslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): East Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Wharton

Percent of map unit: 10 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope

Geomorphic position (three-dimensional): Head slope, side slope, interfluve

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

Laidig

Percent of map unit: 5 percent

Landform: Mountains

Geomorphic position (two-dimensional): Footslope

Geomorphic position (three-dimensional): Lower third of mountain flank

Aspect (representative): East Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

543247—Buchanan gravelly loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 295 to 3,795 feet

Mean annual precipitation: 34 to 50 inches Mean annual air temperature: 46 to 59 degrees F

Frost-free period: 101 to 180 days

Map Unit Composition

Buchanan, extremely stony, and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Buchanan, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults

Setting

Landform: Valley sides and mountain slopes Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountain flank

Slope: 0 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Aspect (representative): East Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Stony colluvium derived from sandstone and shale

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches; lithic bedrock at a depth

of 60 to 99 inches
Frequency of flooding: None
Frequency of ponding: None

Depth to water table: About 14 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; gravelly loam Bt—3 to 21 inches; gravelly loam Btx—21 to 65 inches; cobbly clay loam

Minor Components

Andover, extremely stony

Percent of map unit: 5 percent

Landform: Depressions

Geomorphic position (two-dimensional): Footslope, toeslope

Geomorphic position (three-dimensional): Base slope

Aspect (representative): East Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave

Soil Survey of Delaware Water Gap National Recreation Area

Across-slope shape: Concave

Hydric soil status: Yes

Cookport

Percent of map unit: 5 percent Landform: Broad ridges, plateaus

Geomorphic position (two-dimensional): Summit

Geomorphic position (three-dimensional): Upper third of mountain flank

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Linear, concave Across-slope shape: Concave

Hydric soil status: No

Laidig

Percent of map unit: 5 percent

Landform: Mountains

Geomorphic position (two-dimensional): Footslope

Geomorphic position (three-dimensional): Lower third of mountain flank

Aspect (representative): East Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

Murrill

Percent of map unit: 5 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

543257—Chippewa silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Chippewa and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Chippewa Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landscape: Uplands Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Interfluve

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Till derived from sedimentary rock

Restrictive feature(s): Fragipan at a depth of 8 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 2 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Ap—0 to 8 inches; silt loam

Eg—8 to 16 inches; channery silt loam Bxg—16 to 48 inches; channery loam C—48 to 80 inches; channery loam

Minor Components

Swartswood

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

543258—Chippewa silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Chippewa and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Chippewa Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landscape: Uplands Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Interfluve

Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Till derived from sedimentary rock

Restrictive feature(s): Fragipan at a depth of 8 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 2 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility)
Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4w

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Ap—0 to 8 inches; silt loam

Eg—8 to 16 inches; channery silt loam Bxg—16 to 48 inches; channery loam C—48 to 80 inches; channery loam

Minor Components

Swartswood

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

543259—Chippewa gravelly silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Chippewa, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Chippewa, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landscape: Uplands Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Interfluve

Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Till derived from sedimentary rock

Restrictive feature(s): Fragipan at a depth of 8 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 2 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

A—0 to 8 inches; gravelly silt loam Eg—8 to 16 inches; channery silt loam Bxg—16 to 48 inches; channery loam C—48 to 80 inches; channery loam

Minor Components

Swartswood

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

543271—Delaware fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 0.0 to 909 feet

Mean annual precipitation: 28 to 50 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 210 days

Map Unit Composition

Delaware and similar soils: 90 percent Dissimilar minor components: 9 percent

Description of Delaware Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys

Landform: Low to middle river terraces

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Postglacial alluvium derived from sandstone and shale Restrictive feature(s): Lithic bedrock at a depth of 72 to 99 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 10 inches; fine sandy loam Bw—10 to 40 inches; very fine sandy loam C—40 to 87 inches; loamy fine sand

Minor Components

Alton

Percent of map unit: 5 percent Landform: Terraces and alluvial fans

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Conotton

Percent of map unit: 2 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Hatboro

Percent of map unit: 1 percent

Landform: Flood plains

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Linear, concave Across-slope shape: Linear, concave

Hydric soil status: Yes

Nanticoke

Percent of map unit: 1 percent

Landform: Tidal flats

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Talf

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 1 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: Yes

543276—Fluvaquents

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 0.0 to 1,601 feet

Mean annual precipitation: 34 to 50 inches Mean annual air temperature: 46 to 57 degrees F

Frost-free period: 130 to 210 days

Map Unit Composition

Fluvaquents and similar soils: 85 percent Dissimilar minor components: 8 percent

Description of Fluvaquents

Soil Classification

Fluvaquents

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Rise

Slope: 0 to 2 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): South
Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Alluvium derived from sedimentary rock

Restrictive feature(s): Lithic bedrock at a depth of 72 to 99 inches

Frequency of flooding: Frequent Frequency of ponding: None

Depth to water table: At the surface to a depth of 6 inches

Drainage class: Poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: D

Vegetation

Existing plants: Red maple, sedge, silky dogwood, green ash, northern spicebush, and skunk cabbage

Typical Profile

A—0 to 6 inches; silt loam C—6 to 62 inches; clay

Minor Components

Towhee

Percent of map unit: 5 percent Landform: Depressions

Geomorphic position (two-dimensional): Footslope, toeslope Geomorphic position (three-dimensional): Head slope, side slope Aspect (representative): South Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Linear, concave Across-slope shape: Concave

Hydric soil status: Yes

Mount Lucas

Percent of map unit: 1 percent

Landform: Nearly level to moderately steep hillslopes

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Linear, concave Across-slope shape: Linear, concave

Hydric soil status: No

Nanticoke

Percent of map unit: 1 percent

Landform: Tidal flats

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Talf

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 1 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: Yes

Neshaminy

Percent of map unit: 1 percent

Landform: Hillslopes

Geomorphic position (two-dimensional): Summit, shoulder, backslope Geomorphic position (three-dimensional): Nose slope, side slope, interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

543292—Hazleton very channery loam, 8 to 25 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 2,495 feet

Mean annual precipitation: 36 to 55 inches Mean annual air temperature: 46 to 57 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Hazleton, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 5 percent

Description of Hazleton, Extremely Stony, Soil

Soil Classification

Loamy-skeletal, siliceous, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains

Landform: Gray and red sandstone mountain slopes Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Upper third of mountain flank

Slope: 8 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Loamy residuum weathered from sandstone Restrictive feature(s): Lithic bedrock at a depth of 40 to 80 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

A—0 to 6 inches; very channery loam Bw—6 to 43 inches; very channery loam C—43 to 55 inches; extremely channery loam

R-55 to 80 inches; bedrock

Minor Components

Buchanan

Percent of map unit: 5 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

543293—Hazleton very channery loam, 25 to 60 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 600 to 2,495 feet

Mean annual precipitation: 36 to 55 inches Mean annual air temperature: 46 to 57 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Hazleton, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 5 percent

Description of Hazleton, Extremely Stony, Soil

Soil Classification

Loamy-skeletal, siliceous, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains

Landform: Gray and red sandstone mountain slopes Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Upper third of mountain flank

Slope: 25 to 60 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy residuum weathered from sandstone Restrictive feature(s): Lithic bedrock at a depth of 40 to 80 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 6.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

A—0 to 6 inches; very channery loam Bw—6 to 43 inches; very channery loam C—43 to 60 inches; extremely channery loam

R-60 to 80 inches: bedrock

Minor Components

Buchanan

Percent of map unit: 5 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

543299—Laidig very gravelly loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 3,795 feet

Mean annual precipitation: 34 to 55 inches Mean annual air temperature: 46 to 59 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Laidig, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Laidig, Extremely Stony, Soil

Soil Classification

Fine-loamy, siliceous, active, mesic Typic Fragiudults

Settina

Landscape: Mountains

Landform: Sandstone, conglomerate, quartzite, and shale colluvial mountain slopes

Landform position (two-dimensional): Summit Landform position (three-dimensional): Mountaintop

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Brown fine-loamy colluvium derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 30 to 50 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 30 to 48 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility)

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; very gravelly loam Bt—3 to 38 inches; gravelly loam

Bx—38 to 62 inches; very channery loam

Minor Components

Andover

Percent of map unit: 4 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent

Siope: 3 to 8 percent Down-sione shane: Conca

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: Yes

Buchanan

Percent of map unit: 4 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects

Slope: 3 to 8 percent Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Hydric soil status: No

Hazleton

Percent of map unit: 2 percent

Landform: Gray and red sandstone mountain slopes

Geomorphic position (two-dimensional): Shoulder, backslope

Geomorphic position (three-dimensional): Upper third of mountain flank

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

543300—Laidig very gravelly loam, 8 to 25 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 3,795 feet

Mean annual precipitation: 34 to 55 inches Mean annual air temperature: 46 to 57 degrees F

Frost-free period: 110 to 180 days

Map Unit Composition

Laidig, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Laidig, Extremely Stony, Soil

Soil Classification

Fine-loamy, siliceous, active, mesic Typic Fragiudults

Setting

Landscape: Mountains

Landform: Sandstone, conglomerate, quartzite, and shale colluvial mountain slopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Upper third of mountain flank

Slope: 8 to 25 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Brown fine-loamy colluvium derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 30 to 50 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 30 to 48 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; very gravelly loam Bt—3 to 38 inches; gravelly loam

Bx-38 to 62 inches; very channery loam

Minor Components

Andover, extremely stony

Percent of map unit: 4 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects

Slope: 0 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: Yes

Buchanan

Percent of map unit: 4 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

Hazleton

Percent of map unit: 2 percent

Landform: Gray and red sandstone mountain slopes

Geomorphic position (two-dimensional): Shoulder, backslope

Geomorphic position (three-dimensional): Upper third of mountain flank

Aspect (representative): South Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

543304—Laidig-Rubble land complex, 25 to 60 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 3,795 feet

Mean annual precipitation: 34 to 50 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 120 to 180 days

Map Unit Composition

Laidig and similar soils: 50 percent

Rubble land: 40 percent

Dissimilar minor components: 10 percent

Description of Laidig Soil

Soil Classification

Fine-loamy, siliceous, active, mesic Typic Fragiudults

Setting

Landscape: Mountains

Landform: Sandstone, conglomerate, quartzite, and shale colluvial mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Upper third of mountain flank

Slope: 25 to 60 percent

Soil Survey of Delaware Water Gap National Recreation Area

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Brown fine-loamy colluvium derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 30 to 50 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 30 to 48 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 3 inches; very gravelly loam Bt—3 to 38 inches; gravelly loam

Bx-38 to 62 inches; very channery loam

Description of Rubble Land

Setting

Landscape: Mountains

Landform: Sandstone, conglomerate, quartzite, and shale colluvial mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Upper third of mountain flank

Slope: 25 to 60 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): East Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Stones and boulder fields of sandstone

Restrictive feature(s): Lithic bedrock at a depth of 40 to 72 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 3.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

C—0 to 60 inches; fragmental material

Minor Components

Andover

Percent of map unit: 5 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: Yes

Buchanan

Percent of map unit: 5 percent

Landform: Sandstone and shale hillslopes

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

543318—Rubble land

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 3,795 feet

Mean annual precipitation: 34 to 55 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 175 days

Map Unit Composition

Rubble land: 75 percent

Dissimilar minor components: 25 percent

Description of Rubble Land

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 0 to 90 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Soil Survey of Delaware Water Gap National Recreation Area

Aspect (representative): East Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Stones and boulder fields of sandstone

Restrictive feature(s): Lithic bedrock at a depth of 40 to 72 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 3.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

C—0 to 60 inches; fragmental material

Minor Components

Hazleton

Percent of map unit: 10 percent

Landform: Mountains and mountain slopes

Geomorphic position (two-dimensional): Summit, backslope

Geomorphic position (three-dimensional): Upper third of mountain flank, mountaintop,

and mountain flank

Aspect (representative): East

Aspect (range): All aspects

Slope: 3 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex

Hydric soil status: No

Buchanan

Percent of map unit: 5 percent

Landform: Valley sides and mountain slopes Geomorphic position (two-dimensional): Footslope

Geomorphic position (three-dimensional): Lower third of mountain flank

Aspect (representative): East Aspect (range): All aspects Slope: 8 to 25 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

Clymer

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Shoulder, backslope

Geomorphic position (three-dimensional): Side slope

Soil Survey of Delaware Water Gap National Recreation Area

Aspect (representative): East Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Laidig

Percent of map unit: 5 percent

Landform: Mountains

Geomorphic position (two-dimensional): Footslope

Geomorphic position (three-dimensional): Lower third of mountain flank

Aspect (representative): East Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

543327—Swartswood gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Swartswood and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Swartswood Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Uplands Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone

Soil Survey of Delaware Water Gap National Recreation Area

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 33 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 11 inches; gravelly loam Bw—11 to 34 inches; channery loam

Bx—34 to 47 inches; very gravelly fine sandy loam

Minor Components

Conotton

Percent of map unit: 4 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Chippewa

Percent of map unit: 3 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects

Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Manlius

Percent of map unit: 3 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Summit

Geomorphic position (three-dimensional): Side slope, interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

543328—Swartswood gravelly loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Swartswood and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Swartswood Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Uplands Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 8 to 15 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 33 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 11 inches; gravelly loam Bw—11 to 34 inches; channery loam

Bx—34 to 47 inches; very gravelly fine sandy loam

Minor Components

Conotton

Percent of map unit: 4 percent

Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Chippewa

Percent of map unit: 3 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Manlius

Percent of map unit: 3 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Shoulder Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

543330—Swartswood and Wurtsboro soils, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 50 percent Wurtsboro, extremely stony, and similar soils: 30 percent

Dissimilar minor components: 11 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Uplands Landform: Hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope

Slope: 0 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 33 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 11 inches; gravelly loam Bw—11 to 34 inches; channery loam

Bx-34 to 47 inches; very gravelly fine sandy loam

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Glaciated uplands

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches; lithic bedrock at a depth of 60 to 120 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 12 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 10 inches; gravelly loam Bw-10 to 20 inches; gravelly loam Bx—20 to 64 inches; very gravelly loam

Minor Components

Conotton

Percent of map unit: 4 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Manlius

Percent of map unit: 4 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Summit

Geomorphic position (three-dimensional): Side slope, interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Chippewa, extremely stony

Percent of map unit: 3 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

543331—Swartswood and Wurtsboro soils, 8 to 25 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 620 to 1,800 feet

Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 193 days

Map Unit Composition

Swartswood, extremely stony, and similar soils: 50 percent Wurtsboro, extremely stony, and similar soils: 30 percent

Dissimilar minor components: 7 percent

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Uplands Landform: Hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope

Slope: 8 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 33 to 36 inches (perched)

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 11 inches; gravelly loam Bw—11 to 34 inches; channery loam

Bx—34 to 47 inches; very gravelly fine sandy loam

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Glaciated uplands

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 8 to 25 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches; lithic bedrock at a depth

of 60 to 120 inches
Frequency of flooding: None
Frequency of ponding: None

Depth to water table: About 12 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 10 inches; gravelly loam
Bw—10 to 20 inches; gravelly loam
Bx—20 to 64 inches; very gravelly loam

Minor Components

Conotton

Percent of map unit: 4 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Chippewa, extremely stony Percent of map unit: 3 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

543359—Volusia gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Volusia and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Volusia Soil

Soil Classification

Fine-loamy, mixed, active, mesic Aeric Fragiaguepts

Setting

Landscape: Plateaus Landform: Valley sides

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Side slope

Slope: 3 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Fine-loamy basal till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 10 to 22 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; gravelly silt loam Bw—8 to 15 inches; channery loam Bx—15 to 70 inches; channery loam C—70 to 80 inches; very channery loam

Minor Components

Chippewa

Percent of map unit: 10 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Swartswood

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

543360—Volusia gravelly silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 800 to 1,800 feet

Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 150 days

Map Unit Composition

Volusia, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Volusia, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, mesic Aeric Fragiaguepts

Setting

Landscape: Plateaus Landform: Valley sides

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Side slope

Slope: 0 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Fine-loamy basal till derived from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 10 to 22 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

A—0 to 8 inches; gravelly silt loam Bw—8 to 15 inches; channery loam Bx—15 to 70 inches; channery loam C—70 to 80 inches; very channery loam

Minor Components

Chippewa, extremely stony

Percent of map unit: 10 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Swartswood

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects

Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

543374—Wurtsboro gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Wurtsboro and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Wurtsboro Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Landscape: Glaciated uplands

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects

Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches; lithic bedrock at a depth

of 60 to 120 inches Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 12 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 10 inches; gravelly silt loam Bw—10 to 20 inches; gravelly loam Bx—20 to 64 inches; very channery loam

Minor Components

Chippewa

Percent of map unit: 2 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Conotton

Percent of map unit: 2 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Halsey

Percent of map unit: 2 percent

Landform: Flood plains

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects

Slope: 0 to 2 percent Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil status: Yes

Manlius

Percent of map unit: 2 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Summit

Geomorphic position (three-dimensional): Side slope, interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Phelps

Percent of map unit: 2 percent

Landform: Terraces

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 2 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

543375—Wurtsboro gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Wurtsboro and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Wurtsboro Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Glaciated uplands

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear

Aspect (representative): Southeast Aspect (range): All aspects

Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Glacial till derived from quartzite, conglomerate, and/or sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches; lithic bedrock at a depth

of 60 to 120 inches
Frequency of flooding: None
Frequency of ponding: None

Depth to water table: About 12 to 30 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 10 inches; gravelly silt loam Bw—10 to 20 inches; gravelly loam Bx—20 to 64 inches; very channery loam

Minor Components

Chippewa

Percent of map unit: 2 percent Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Conotton

Percent of map unit: 2 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Halsey

Percent of map unit: 2 percent

Landform: Flood plains

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 2 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Manlius

Percent of map unit: 2 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Shoulder Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent

Down-slope shape: Convex, linear

Soil Survey of Delaware Water Gap National Recreation Area

Across-slope shape: Linear, convex

Hydric soil status: No

Phelps

Percent of map unit: 2 percent

Landform: Terraces

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 2 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

612280—Scio silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 95 to 1,000 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Scio and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Scio Soil

Soil Classification

Coarse-silty, mixed, active, mesic Aquic Dystrudepts

Setting

Landscape: River valleys Landform: Inner terraces

Landform position (three-dimensional): Tread

Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial coarse-silty alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 18 to 24 inches Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility)

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 13.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap1—0 to 6 inches; silt loam Ap2—6 to 13 inches; silt loam Bw1—13 to 23 inches; silt loam Bw2—23 to 28 inches; silt loam BC—28 to 50 inches; silt loam C1—50 to 59 inches; silt loam C2—59 to 72 inches; silt loam

Minor Components

Aeric Endoaquepts, postglacial alluvium

Percent of map unit: 10 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

Unadilla

Percent of map unit: 10 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

612666—Colonie loamy fine sand, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Colonie and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Colonie Soil

Soil Classification

Mixed, mesic Lamellic Udipsamments

Setting

Landscape: River valleys
Landform: Outer terraces
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Postglacial sandy alluvium, sandy eolian deposits, and/or glaciofluvial

deposits

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

A—0 to 2 inches; loamy fine sand Ap—2 to 11 inches; loamy fine sand

E—11 to 24 inches; fine sand

E and Bt1—24 to 40 inches; fine sand E and Bt2—40 to 62 inches; fine sand

Minor Components

Delaware

Percent of map unit: 10 percent Landform: Outer terraces Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 10 percent Landform: Outer terraces Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

612668—Hoosic-Hazen complex, 8 to 15 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,745 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Hoosic, very stony, and similar soils: 60 percent Hazen, very stony, and similar soils: 30 percent Dissimilar minor components: 10 percent

Description of Hoosic, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Humic Dystrudepts

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap—1 to 9 inches; gravelly loam

Bw—9 to 21 inches; very gravelly coarse sandy loam

2C1—21 to 27 inches; extremely gravelly loamy coarse sand

2C2—27 to 37 inches; extremely gravelly coarse sand 2C3—37 to 49 inches; extremely gravelly coarse sand 2C4—49 to 60 inches; extremely gravelly coarse sand

Description of Hazen, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Mollic Hapludalfs

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy glaciofluvial deposits derived from limestone,

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap—1 to 10 inches; loam Bt—10 to 18 inches; sandy loam

2C1—18 to 29 inches; very stony loamy coarse sand 2C2—29 to 41 inches; very gravelly coarse sand 2C3—41 to 60 inches; extremely gravelly coarse sand

Minor Components

Colonie, very stony

Percent of map unit: 5 percent

Landform: Valley trains

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Otisville, very stony

Percent of map unit: 5 percent Landform: Valley trains

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

612724—Lordstown-Wallpack complex, 15 to 35 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lordstown, very rocky, and similar soils: 50 percent Wallpack, very rocky, and similar soils: 40 percent

Dissimilar minor components: 10 percent

Description of Lordstown, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ridges
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bw1—3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C-22 to 36 inches; very gravelly fine sandy loam

2R—36 to 80 inches; bedrock

Description of Wallpack, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; gravelly silt loam
AB—2 to 5 inches; gravelly silt loam
Bt—5 to 18 inches; gravelly silt loam
Btx—18 to 24 inches; gravelly loam
BCtx1—24 to 42 inches; gravelly silt loam
BCtx2—42 to 60 inches; gravelly loam

Minor Components

Chadakoin, very rocky

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Rock outcrop

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

612732—Atherton mucky silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 49.2 to 1,499 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Atherton, very poorly drained, and similar soils: 60 percent Atherton, poorly drained, and similar soils: 30 percent

Dissimilar minor components: 10 percent

Description of Atherton, Very Poorly Drained, Soil

Soil Classification

Fine-silty, mixed, active, nonacid, mesic Aeric Endoaquepts

Setting

Landscape: River valleys Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Medium

Parent material: Postglacial fine-silty alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 10.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material Oe—2 to 4 inches; moderately decomposed plant material

A—4 to 8 inches; mucky silt loam
Bg1—8 to 10 inches; silt loam
Bg2—10 to 18 inches; silt loam
Bg3—18 to 29 inches; silt loam
BC1—29 to 32 inches; silt loam
BC2—32 to 41 inches; silt loam
C1—41 to 45 inches; fine sandy loam
C2—45 to 50 inches; loam

C3—50 to 60 inches; very fine sandy loam C4—60 to 70 inches; fine sandy loam

Description of Atherton, Poorly Drained, Soil

Soil Classification

Fine-silty, mixed, active, nonacid, mesic Aeric Endoaquepts

Setting

Landscape: River valleys Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Medium

Parent material: Postglacial fine-silty alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 6 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

A—0 to 6 inches; loam Bg1—6 to 12 inches; loam Bg2—12 to 30 inches; loam

2Cg1—30 to 40 inches; sandy clay loam 2Cg2—40 to 60 inches; sandy clay loam

Minor Components

Aeric Endoaquepts, postglacial alluvium

Percent of map unit: 10 percent

Landform: Inner terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

612738—Fluvaquents, loamy, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Fluvaquents, occasionally flooded, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Fluvaquents, Occasionally Flooded

Soil Classification

Fluvaquents

Setting

Landscape: River valleys Landform: Flood plains

Landform position (three-dimensional): Talf

Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Aquic

Properties and Qualities

Runoff: Low

Parent material: Recent alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Occasional Frequency of ponding: None

Depth to water table: At the surface to a depth of 18 inches

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

A1-0 to 5 inches; silt loam A2-5 to 12 inches; silt loam

C1—12 to 18 inches; sandy clay loam C2-18 to 24 inches; sandy clay loam C3-24 to 60 inches; sandy loam

Minor Components

Udifluvents, occasionally flooded

Percent of map unit: 10 percent

Landform: Flood plains

Geomorphic position (three-dimensional): Riser

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Hydric soil status: No

612753—Wallpack fine sandy loam, aeolian mantle, 8 to 15 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack, aeolian mantle, very stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wallpack, Aeolian Mantle, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Hapludalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Eolian deposits over coarse-loamy till derived from limestone,

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.2 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; fine sandy loam Ap—2 to 8 inches; fine sandy loam Bw1—8 to 14 inches; fine sandy loam 2Bw2—14 to 21 inches; fine sandy loam

2Bw3—21 to 26 inches; gravelly fine sandy loam 2BC1—26 to 31 inches; very gravelly fine sandy loam 2BC2—31 to 36 inches; very gravelly fine sandy loam 2BC3—36 to 60 inches; gravelly fine sandy loam

Minor Components

Lordstown, very stony

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Aquic Dystrudepts, aeolian mantle, very stony

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects

Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

612756—Wallpack fine sandy loam, aeolian mantle, 0 to 8 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack, aeolian mantle, very stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wallpack, Aeolian Mantle, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Hapludalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Eolian deposits over coarse-loamy till derived from limestone,

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.2 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; fine sandy loam Ap—2 to 8 inches; fine sandy loam Bw1—8 to 14 inches; fine sandy loam 2Bw2—14 to 21 inches; fine sandy loam

2Bw3—21 to 26 inches; gravelly fine sandy loam 2BC1—26 to 31 inches; very gravelly fine sandy loam 2BC2—31 to 36 inches; very gravelly fine sandy loam 2BC3—36 to 60 inches; gravelly fine sandy loam

Minor Components

Lordstown, very stony

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Aquic Dystrudepts, aeolian mantle, very stony

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex

Across-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

612757—Wallpack fine sandy loam, aeolian mantle, 15 to 35 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wallpack, aeolian mantle, very stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wallpack, Aeolian Mantle, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Hapludalfs

Settina

Landscape: Till plains

Landform: Ridges
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Eolian deposits over coarse-loamy till derived from limestone,

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.2 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; fine sandy loam
Ap—2 to 8 inches; fine sandy loam
Bw1—8 to 14 inches; fine sandy loam
2Bw2—14 to 21 inches; fine sandy loam

2Bw3—21 to 26 inches; gravelly fine sandy loam 2BC1—26 to 31 inches; very gravelly fine sandy loam 2BC2—31 to 36 inches; very gravelly fine sandy loam 2BC3—36 to 60 inches; gravelly fine sandy loam

Minor Components

Lordstown, very stony

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Aquic Dystrudepts, aeolian mantle, very stony

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

612767—Wellsboro silt loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,095 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wellsboro, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wellsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from shale and/or coarse-loamy till derived

from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 12 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 32 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap-0 to 8 inches; silt loam

Bw1—8 to 15 inches; cobbly silt loam Bw2—15 to 24 inches; cobbly loam

Bw3—24 to 29 inches; cobbly loam Bx1—29 to 37 inches; cobbly sandy loam Bx2—37 to 60 inches; cobbly sandy loam

Minor Components

Morris, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lackawanna, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

612768—Wellsboro silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 1,095 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wellsboro, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wellsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from shale and/or coarse-loamy till derived

from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 12 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 32 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap-0 to 8 inches; silt loam

Bw1—8 to 15 inches; cobbly silt loam Bw2—15 to 24 inches; cobbly loam Bw3—24 to 29 inches; cobbly loam Bx1—29 to 37 inches; cobbly sandy loam Bx2—37 to 60 inches; cobbly sandy loam

Minor Components

Morris, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lackawanna, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex

Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

613393—Alden silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Alden, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Alden, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, nonacid, mesic Mollic Endoaquepts

Setting

Landscape: Till plains Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Low

Parent material: Silty colluvium derived from sandstone over fine-loamy till derived

from sandstone

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; silt loam
Bg1—7 to 14 inches; silt loam
Bg2—14 to 28 inches; silty clay loam

Bg3—28 to 43 inches; loam C—43 to 60 inches; silt loam

Minor Components

Chippewa, extremely stony

Percent of map unit: 10 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope

Geomorphic position (three-dimensional): Base slope

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

613447—Unadilla silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Unadilla and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Unadilla Soil

Soil Classification

Coarse-silty, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys Landform: Inner terraces

Landform position (three-dimensional): Tread

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial coarse-silty alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1—0 to 8 inches; silt loam Ap2—8 to 14 inches; silt loam Bw—14 to 25 inches; silt loam BC—25 to 39 inches; silt loam

C-39 to 60 inches; very fine sandy loam

Minor Components

Delaware

Percent of map unit: 10 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Colonie

Percent of map unit: 5 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

613448—Unadilla silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Unadilla and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Unadilla Soil

Soil Classification

Coarse-silty, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys Landform: Inner terraces

Landform position (three-dimensional): Riser

Slope: 3 to 8 percent

Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Postglacial coarse-silty alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1—0 to 8 inches; silt loam Ap2—8 to 14 inches; silt loam Bw—14 to 25 inches; silt loam BC—25 to 39 inches; silt loam

C-39 to 60 inches; very fine sandy loam

Minor Components

Delaware

Percent of map unit: 10 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Riser

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Colonie

Percent of map unit: 5 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

614075—Wurtsboro-Swartswood complex, 15 to 35 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,100 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 80 percent Swartswood, extremely stony, and similar soils: 20 percent

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; fine sandy loam E—3 to 4 inches; fine sandy loam Bhs—4 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam

Bx1—24 to 33 inches; gravelly sandy loam Bx2—33 to 60 inches; gravelly sandy loam

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

620179—Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1.800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Arnot, very rocky, and similar soils: 55 percent Lordstown, very rocky, and similar soils: 40 percent

Dissimilar minor components: 5 percent

Description of Arnot, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Mountains Landform: Ground moraines

Landform position (two-dimensional): Summit Landform position (three-dimensional): Mountaintop

Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam
Bhs—3 to 4 inches; fine sandy loam
Bw1—4 to 12 inches; very gravelly loam
Bw2—12 to 17 inches; extremely gravelly loam

2R—17 to 80 inches; bedrock

Description of Lordstown, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Summit Landform position (three-dimensional): Mountaintop

Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Coarse-loamy till derived from conglomerate Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bw1-3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C—22 to 36 inches; very gravelly fine sandy loam

2R-36 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 5 percent Landform: Ground moraines

Geomorphic position (two-dimensional): Summit Geomorphic position (three-dimensional): Mountaintop

Aspect (representative): North Aspect (range): All aspects Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: Unranked

620180—Arnot-Lordstown-Rock outcrop complex, 15 to 35 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches

Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Arnot and similar soils: 45 percent Lordstown and similar soils: 40 percent

Rock outcrop: 15 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Mountains Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 15 to 35 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam
Bhs—3 to 4 inches; fine sandy loam
Bw1—4 to 12 inches; very gravelly loam
Bw2—12 to 17 inches; extremely gravelly loam

2R—17 to 80 inches; bedrock

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 15 to 35 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from conglomerate Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches: loam

E-2 to 3 inches; fine sandy loam

Bw1-3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C—22 to 36 inches; very gravelly fine sandy loam

2R-36 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Parent material: Conglomerate

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

620181—Arnot-Lordstown-Rock outcrop complex, 35 to 60 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Arnot and similar soils: 60 percent Lordstown and similar soils: 25 percent

Rock outcrop: 15 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam
Bhs—3 to 4 inches; fine sandy loam
Bw1—4 to 12 inches; very gravelly loam

Bw2—12 to 17 inches; extremely gravelly loam

2R-17 to 80 inches; bedrock

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from conglomerate Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bw1—3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C—22 to 36 inches; very gravelly fine sandy loam

2R—36 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains
Landform: Ground moraines

Soil Survey of Delaware Water Gap National Recreation Area

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Parent material: Conglomerate

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

623089—Chippewa silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,000 feet

Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Chippewa, extremely stony, and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Chippewa, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landscape: Drumlin fields
Landform: Interdrumlins
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Aquic

Properties and Qualities

Runoff: Very high

Soil Survey of Delaware Water Gap National Recreation Area

Parent material: Fine-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 8 to 20 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A—2 to 4 inches; silt loam
Eg—4 to 8 inches; silt loam
Bg—8 to 13 inches; silt loam
Bgx1—13 to 21 inches; silt loam
Bgx2—21 to 29 inches; silt loam
Cg1—29 to 34 inches; silt loam

Cg2—34 to 60 inches; fine sandy loam

Minor Components

Alden, extremely stony

Percent of map unit: 10 percent

Landform: Interdrumlins
Aspect (representative): North
Aspect (range): All aspects
Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Venango, extremely stony

Percent of map unit: 10 percent

Landform: Drumlins

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

623109—Farmington-Rock outcrop complex, 0 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 900 feet

Mean annual precipitation: 30 to 64 inches

Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Farmington and similar soils: 50 percent

Rock outcrop: 40 percent

Dissimilar minor components: 10 percent

Description of Farmington Soil

Soil Classification

Loamy, mixed, active, mesic Lithic Eutrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from limestone and dolomite Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; silt loam Bw1—3 to 9 inches; silt loam Bw2—9 to 15 inches; silt loam 2R—15 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Till plains
Landform: Ground moraines
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects

Properties and Qualities

Parent material: Limestone and dolomite

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

Minor Components

Galway

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

624811—Galway loam, 35 to 60 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 900 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Galway, very rocky, and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Galway, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, superactive, mesic Typic Eutrudepts

Setting

Landscape: Till plains
Landform: Ridges
Slope: 35 to 60 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects

Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from limestone and dolomite Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material Oe—2 to 3 inches; moderately decomposed plant material

A-3 to 5 inches; loam

Bw1—5 to 15 inches; gravelly loam Bw2—15 to 24 inches; gravelly loam 2R—24 to 80 inches; bedrock

Minor Components

Farmington, very rocky

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Rock outcrop

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

Wallpack, aeolian mantle, very rocky

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

624813—Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lackawanna, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Lackawanna, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from shale and/or coarse-loamy till derived

from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Wellsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Oquaga, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

624816—Lordstown-Wallpack complex, 8 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lordstown, very rocky, and similar soils: 50 percent Wallpack, very rocky, and similar soils: 35 percent

Dissimilar minor components: 15 percent

Description of Lordstown, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ridges
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects

Soil Survey of Delaware Water Gap National Recreation Area

Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bw1-3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C—22 to 36 inches; very gravelly fine sandy loam

2R—36 to 80 inches; bedrock

Description of Wallpack, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; gravelly silt loam
AB—2 to 5 inches; gravelly silt loam
Bt—5 to 18 inches; gravelly silt loam
Btx—18 to 24 inches; gravelly loam
BCtx1—24 to 42 inches; gravelly silt loam
BCtx2—42 to 60 inches; gravelly loam

Minor Components

Cambridge, very rocky

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Chadakoin, very rocky

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Rock outcrop

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

624822—Lordstown-Wallpack complex, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lordstown and similar soils: 50 percent Wallpack and similar soils: 35 percent Dissimilar minor components: 15 percent

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ridges
Slope: 15 to 25 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bw1-3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C—22 to 36 inches; very gravelly fine sandy loam

2R-36 to 80 inches; bedrock

Description of Wallpack Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 15 to 25 percent
Down-slope shape: Convex
Across-slope shape: Linear

Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1—0 to 3 inches; silt loam

Ap2—3 to 9 inches; gravelly silt loam
Bt—9 to 16 inches; gravelly silt loam
Btx1—16 to 25 inches; gravelly silt loam
Btx2—25 to 65 inches; very gravelly silt loam

Minor Components

Chadakoin

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 25 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Cambridge

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 15 to 25 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

624823—Lordstown-Wallpack complex, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lordstown and similar soils: 50 percent Wallpack and similar soils: 35 percent Dissimilar minor components: 15 percent

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ridges
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches: loam

E—2 to 3 inches; fine sandy loam

Bw1-3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C—22 to 36 inches; very gravelly fine sandy loam

2R—36 to 80 inches; bedrock

Description of Wallpack Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1-0 to 3 inches; silt loam

Ap2—3 to 9 inches; gravelly silt loam
Bt—9 to 16 inches; gravelly silt loam
Btx1—16 to 25 inches; gravelly silt loam
Btx2—25 to 65 inches; very gravelly silt loam

Minor Components

Chadakoin

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Cambridge

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

624824—Lordstown-Wallpack complex, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lordstown and similar soils: 50 percent Wallpack and similar soils: 35 percent Dissimilar minor components: 15 percent

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ridges
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bw1—3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam C-22 to 36 inches; very gravelly fine sandy loam

2R—36 to 80 inches; bedrock

Description of Wallpack Soil

Soil Classification

Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Setting

Landscape: Till plains
Landform: Ridges
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 12 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap1—0 to 3 inches; silt loam

Ap2—3 to 9 inches; gravelly silt loam
Bt—9 to 16 inches; gravelly silt loam
Btx1—16 to 25 inches; gravelly silt loam
Btx2—25 to 65 inches; very gravelly silt loam

Minor Components

Chadakoin

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Cambridge

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

624826—Manlius-Nassau complex, 35 to 60 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Manlius, very rocky, and similar soils: 60 percent Nassau, very rocky, and similar soils: 25 percent

Dissimilar minor components: 15 percent

Description of Manlius, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Settina

Landscape: Till plains
Landform: Ridges
Slope: 35 to 60 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; very channery silt loam

Bw—2 to 18 inches; extremely channery silt loam C—18 to 27 inches; extremely channery silt loam

2R-27 to 80 inches; bedrock

Description of Nassau, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Till plains
Landform: Ridges
Slope: 35 to 60 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; very channery silt loam

Bw-2 to 15 inches; extremely channery silt loam

2R-15 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 10 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

Wallpack, very rocky

Percent of map unit: 5 percent

Landform: Ridges

Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

624827—Nassau-Manlius complex, 0 to 8 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,550 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Nassau, very rocky, and similar soils: 55 percent Manlius, very rocky, and similar soils: 44 percent

Dissimilar minor components: 1 percent

Description of Nassau, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Ap—0 to 7 inches; very channery silt loam Bw—7 to 13 inches; extremely channery silt loam

2R-13 to 80 inches; bedrock

Description of Manlius, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 9 inches; very channery silt loam Bw—9 to 20 inches; extremely channery silt loam CB—20 to 29 inches; extremely channery silt loam

2R-29 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 1 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

624828—Nassau-Manlius complex, 8 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,550 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Nassau, very rocky, and similar soils: 55 percent Manlius, very rocky, and similar soils: 44 percent

Dissimilar minor components: 1 percent

Description of Nassau, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Ap—0 to 7 inches; very channery silt loam Bw—7 to 13 inches; extremely channery silt loam

2R-13 to 80 inches; bedrock

Description of Manlius, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 9 inches; very channery silt loam Bw—9 to 20 inches; extremely channery silt loam CB—20 to 29 inches; extremely channery silt loam

2R-29 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 1 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

624829—Nassau-Manlius complex, 15 to 35 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,550 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Nassau, very rocky, and similar soils: 55 percent Manlius, very rocky, and similar soils: 44 percent

Dissimilar minor components: 1 percent

Description of Nassau, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Ap—0 to 7 inches; very channery silt loam Bw—7 to 13 inches; extremely channery silt loam

2R—13 to 80 inches; bedrock

Description of Manlius, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Settina

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 9 inches; very channery silt loam

Bw—9 to 20 inches; extremely channery silt loam CB—20 to 29 inches; extremely channery silt loam

2R-29 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 1 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

624832—Nassau-Rock outcrop complex, 35 to 60 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,550 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Nassau and similar soils: 50 percent

Rock outcrop: 45 percent

Dissimilar minor components: 5 percent

Description of Nassau Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Till plains

Landform: Ground moraines Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; very channery silt loam

Bw-2 to 15 inches; extremely channery silt loam

2R—15 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Till plains
Landform: Ground moraines
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects

Properties and Qualities

Parent material: Acid shale

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

Minor Components

Manlius

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

624841—Oquaga-Rock outcrop complex, 35 to 60 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga and similar soils: 60 percent

Rock outcrop: 25 percent

Dissimilar minor components: 15 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 35 to 60 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains
Landform: Ground moraines
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects

Properties and Qualities

Parent material: Sandstone

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

Minor Components

Arnot

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

Lackawanna

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

624845—Rock outcrop-Farmington-Galway complex, 15 to 35 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 900 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Rock outcrop: 45 percent

Farmington and similar soils: 35 percent Galway and similar soils: 20 percent

Description of Rock Outcrop

Setting

Landscape: Till plains Landform: Ground moraines Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Parent material: Limestone and dolomite

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

Description of Farmington Soil

Soil Classification

Loamy, mixed, active, mesic Lithic Eutrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till derived from limestone and dolomite Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; silt loam Bw1—3 to 9 inches; silt loam Bw2—9 to 15 inches; silt loam 2R—15 to 80 inches; bedrock

Description of Galway Soil

Soil Classification

Coarse-loamy, mixed, superactive, mesic Typic Eutrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from limestone and dolomite Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A-3 to 5 inches; loam

Bw1—5 to 15 inches; gravelly loam Bw2—15 to 24 inches; gravelly loam

2R-24 to 80 inches; bedrock

624846—Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Rock outcrop: 40 percent

Arnot and similar soils: 30 percent

Rubble land: 20 percent

Dissimilar minor components: 10 percent

Description of Rock Outcrop

Setting

Landscape: Mountains
Landform: Ground moraines
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects

Properties and Qualities

Parent material: Conglomerate

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Mountains Landform: Ground moraines Slope: 60 to 80 percent Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam Bhs—3 to 4 inches; fine sandy loam Bw1—4 to 12 inches; very gravelly loam

Bw2—12 to 17 inches; extremely gravelly loam

2R—17 to 80 inches; bedrock

Description of Rubble Land

Setting

Landscape: Mountains Landform: Talus slopes Slope: 60 to 80 percent Down-slope shape: Concave Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Runoff: Low

Parent material: Talus derived from conglomerate Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 3.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

C-0 to 60 inches; stones

Minor Components

Lordstown

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 60 to 80 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

626816—Udifluvents, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Udifluvents, occasionally flooded, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Udifluvents, Occasionally Flooded

Soil Classification

Udifluvents

Setting

Landscape: River valleys Landform: Flood plains

Landform position (three-dimensional): Rise

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Occasional Frequency of ponding: None

Depth to water table: About 18 to 60 inches Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: A

Typical Profile

A—0 to 3 inches; loamy sand C1—3 to 16 inches; loamy sand C2—16 to 22 inches; sandy loam C3—22 to 27 inches; sandy loam C4—27 to 32 inches; sandy loam

C5—32 to 60 inches; stratified loamy sand to sandy loam

Minor Components

Fluvaquents, occasionally flooded

Percent of map unit: 10 percent

Landform: Flood plains

Geomorphic position (three-dimensional): Talf

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: Yes

635458—Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga, very rocky, and similar soils: 55 percent Lackawanna, very rocky, and similar soils: 30 percent

Dissimilar minor components: 15 percent

Description of Oquaga, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects

Soil Survey of Delaware Water Gap National Recreation Area

Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Lackawanna, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Rock outcrop

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

Wellsboro, very rocky

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

635459—Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga, very rocky, and similar soils: 50 percent Lackawanna, very rocky, and similar soils: 35 percent

Dissimilar minor components: 15 percent

Description of Oquaga, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Lackawanna, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Soil Survey of Delaware Water Gap National Recreation Area

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Rock outcrop

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: Unranked

Wellsboro, very rocky

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

740953—Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Delaware, rarely flooded, and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Delaware, Rarely Flooded, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys
Landform: Terraces
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Postglacial coarse-loamy alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.2 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap1—1 to 4 inches; fine sandy loam Ap2—4 to 11 inches; fine sandy loam Bw1—11 to 20 inches; fine sandy loam Bw2—20 to 33 inches; fine sandy loam BC—33 to 41 inches; fine sandy loam C1—41 to 56 inches; fine sandy loam C2—56 to 60 inches; loam

Minor Components

Colonie

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

740968—Nassau-Manlius complex, 8 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,550 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Nassau, very rocky, and similar soils: 55 percent Manlius, very rocky, and similar soils: 44 percent

Dissimilar minor components: 1 percent

Description of Nassau, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Ap—0 to 7 inches; very channery silt loam Bw—7 to 13 inches; extremely channery silt loam

2R—13 to 80 inches; bedrock

Description of Manlius, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 9 inches; very channery silt loam Bw—9 to 20 inches; extremely channery silt loam CB—20 to 29 inches; extremely channery silt loam

2R-29 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 1 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

740969—Nassau-Manlius complex, 15 to 35 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,550 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Nassau, very rocky, and similar soils: 55 percent Manlius, very rocky, and similar soils: 44 percent

Dissimilar minor components: 1 percent

Description of Nassau, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Ap—0 to 7 inches; very channery silt loam

Bw—7 to 13 inches; extremely channery silt loam

2R—13 to 80 inches; bedrock

Description of Manlius, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

-

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from acid shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 9 inches; very channery silt loam

Bw—9 to 20 inches; extremely channery silt loam CB—20 to 29 inches; extremely channery silt loam

2R-29 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 1 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

740971—Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga, very rocky, and similar soils: 55 percent Lackawanna, very rocky, and similar soils: 30 percent

Dissimilar minor components: 15 percent

Description of Oquaga, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Lackawanna, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains Landform: Ground moraines Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Rock outcrop

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: Unranked

Wellsboro, very rocky

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Convex

Hydric soil status: No

740972—Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga, very rocky, and similar soils: 50 percent Lackawanna, very rocky, and similar soils: 35 percent

Dissimilar minor components: 15 percent

Description of Oquaga, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Lackawanna, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Rock outcrop

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: Unranked

Wellsboro, very rocky

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex

Hydric soil status: No

740974—Oquaga-Rock outcrop complex, 35 to 60 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga and similar soils: 60 percent

Rock outcrop: 25 percent

Dissimilar minor components: 15 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 35 to 60 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility)

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains Landform: Ground moraines Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Parent material: Sandstone

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R—0 to 80 inches; bedrock

Minor Components

Arnot

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

Lackawanna

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Convex

Hydric soil status: No

740975—Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Rock outcrop: 40 percent

Arnot and similar soils: 30 percent

Rubble land: 20 percent

Dissimilar minor components: 10 percent

Description of Rock Outcrop

Setting

Landscape: Mountains Landform: Ground moraines Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Parent material: Conglomerate

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R—0 to 80 inches; bedrock

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Mountains Landform: Ground moraines Slope: 60 to 80 percent Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam Bhs—3 to 4 inches; fine sandy loam Bw1—4 to 12 inches; very gravelly loam

Bw2—12 to 17 inches; extremely gravelly loam

2R—17 to 80 inches; bedrock

Description of Rubble Land

Setting

Landscape: Mountains
Landform: Talus slopes
Slope: 60 to 80 percent
Down-slope shape: Concave
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects

Properties and Qualities

Runoff: Low

Parent material: Talus derived from conglomerate Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 3.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

C-0 to 60 inches; stones

Minor Components

Lordstown

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 60 to 80 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

740987—Scio silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 95 to 1,000 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Scio and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Scio Soil

Soil Classification

Coarse-silty, mixed, active, mesic Aquic Dystrudepts

Setting

Landscape: River valleys Landform: Inner terraces

Landform position (three-dimensional): Tread

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial coarse-silty alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 18 to 24 inches Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 13.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap1—0 to 6 inches; silt loam Ap2—6 to 13 inches; silt loam Bw1—13 to 23 inches; silt loam Bw2—23 to 28 inches; silt loam BC—28 to 50 inches; silt loam C1—50 to 59 inches; silt loam C2—59 to 72 inches; silt loam

Minor Components

Aeric Endoaquepts, postglacial alluvium

Percent of map unit: 10 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

Unadilla

Percent of map unit: 10 percent

Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

740988—Udifluvents, 0 to 3 percent slopes, occasionally flooded

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Udifluvents, occasionally flooded, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Udifluvents, Occasionally Flooded

Soil Classification

Udifluvents

Setting

Landscape: River valleys Landform: Flood plains

Landform position (three-dimensional): Rise

Slope: 0 to 3 percent Down-slope shape: Concave Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Occasional Frequency of ponding: None

Depth to water table: About 18 to 60 inches Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2w

Hydric soil status: No Hydrologic soil group: A

Typical Profile

A—0 to 3 inches; loamy sand C1—3 to 16 inches; loamy sand C2—16 to 22 inches; sandy loam C3—22 to 27 inches; sandy loam C4—27 to 32 inches; sandy loam

C5—32 to 60 inches; stratified loamy sand to sandy loam

Minor Components

Fluvaquents, occasionally flooded

Percent of map unit: 10 percent

Landform: Flood plains

Geomorphic position (three-dimensional): Talf

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: Yes

740991—Unadilla silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Unadilla and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Unadilla Soil

Soil Classification

Coarse-silty, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys Landform: Inner terraces

Landform position (three-dimensional): Tread

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial coarse-silty alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 1

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1—0 to 8 inches; silt loam Ap2—8 to 14 inches; silt loam Bw—14 to 25 inches; silt loam BC—25 to 39 inches; silt loam

C-39 to 60 inches; very fine sandy loam

Minor Components

Delaware

Percent of map unit: 10 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects

Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Colonie

Percent of map unit: 5 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

740992—Unadilla silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Unadilla and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Unadilla Soil

Soil Classification

Coarse-silty, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys Landform: Inner terraces

Landform position (three-dimensional): Riser

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Postglacial coarse-silty alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap1—0 to 8 inches; silt loam Ap2—8 to 14 inches; silt loam Bw—14 to 25 inches; silt loam BC—25 to 39 inches; silt loam

C-39 to 60 inches; very fine sandy loam

Minor Components

Delaware

Percent of map unit: 10 percent

Landform: Inner terraces

Geomorphic position (three-dimensional): Riser

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Colonie

Percent of map unit: 5 percent Landform: Inner terraces

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

740995—Wellsboro silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,095 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wellsboro, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wellsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear

Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from shale and/or coarse-loamy till derived

from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 12 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 32 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap-0 to 8 inches; silt loam

Bw1—8 to 15 inches; cobbly silt loam Bw2—15 to 24 inches; cobbly loam Bw3—24 to 29 inches; cobbly loam Bx1—29 to 37 inches; cobbly sandy loam Bx2—37 to 60 inches; cobbly sandy loam

Minor Components

Morris, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lackawanna, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

740996—Wellsboro silt loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,095 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wellsboro, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Wellsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from shale and/or coarse-loamy till derived

from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 12 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 32 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap-0 to 8 inches; silt loam

Bw1—8 to 15 inches; cobbly silt loam Bw2—15 to 24 inches; cobbly loam Bw3—24 to 29 inches; cobbly loam Bx1—29 to 37 inches; cobbly sandy loam

Bx1—29 to 37 inches; cobbly sandy loam Bx2—37 to 60 inches; cobbly sandy loam

Minor Components

Morris, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

Lackawanna, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Hydric soil status: No

741149—Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lackawanna, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Lackawanna, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains Landform: Ground moraines Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear

Soil Survey of Delaware Water Gap National Recreation Area

Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Wellsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Oquaga, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

741150—Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lackawanna, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Lackawanna, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone and siltstone and/or coarse-

loamy till derived from shale

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Wellsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Oquaga, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 15 to 35 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

801114—Oquaga-Rock outcrop complex, 0 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga and similar soils: 75 percent

Rock outcrop: 15 percent

Dissimilar minor components: 10 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 0 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects

Soil Survey of Delaware Water Gap National Recreation Area

Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains
Landform: Ground moraines
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects

Properties and Qualities

Parent material: Sandstone

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

Minor Components

Arnot

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

Wellsboro

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

810906—Oquaga-Rock outcrop complex, 0 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Oquaga and similar soils: 75 percent

Rock outcrop: 15 percent

Dissimilar minor components: 10 percent

Description of Oquaga Soil

Soil Classification

Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 0 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Loamy till derived from sandstone and siltstone and/or loamy till

derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; channery loam

Bw—4 to 20 inches; very channery loam C—20 to 25 inches; extremely channery loam

2R-25 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains
Landform: Ground moraines
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects

Properties and Qualities

Parent material: Sandstone

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

Minor Components

Arnot

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

Wellsboro

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: No

1147465—Alden silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Alden, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Alden, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, nonacid, mesic Mollic Endoaguepts

Setting

Landscape: Till plains Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Base slope

Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Low

Parent material: Silty colluvium derived from sandstone over fine-loamy till derived

from sandstone

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A-2 to 7 inches; silt loam Bg1—7 to 14 inches; silt loam Bg2—14 to 28 inches; silty clay loam

Bg3—28 to 43 inches; loam C-43 to 60 inches; silt loam

Minor Components

Chippewa, extremely stony

Percent of map unit: 10 percent

Landform: Depressions

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

1147467—Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Arnot, very rocky, and similar soils: 55 percent Lordstown, very rocky, and similar soils: 40 percent

Dissimilar minor components: 5 percent

Description of Arnot, Very Rocky, Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Landscape: Mountains Landform: Ground moraines

Landform position (two-dimensional): Summit Landform position (three-dimensional): Mountaintop

Slope: 0 to 15 percent Down-slope shape: Linear Across-slope shape: Convex Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam
Bhs—3 to 4 inches; fine sandy loam
Bw1—4 to 12 inches; very gravelly loam
Bw2—12 to 17 inches; extremely gravelly loam

2R—17 to 80 inches; bedrock

Description of Lordstown, Very Rocky, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Summit Landform position (three-dimensional): Mountaintop

Slope: 0 to 15 percent
Down-slope shape: Linear
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Coarse-loamy till derived from conglomerate Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bw1—3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C-22 to 36 inches; very gravelly fine sandy loam

2R—36 to 80 inches; bedrock

Minor Components

Rock outcrop

Percent of map unit: 5 percent Landform: Ground moraines

Geomorphic position (two-dimensional): Summit Geomorphic position (three-dimensional): Mountaintop

Aspect (representative): North Aspect (range): All aspects Down-slope shape: Linear Across-slope shape: Convex Hydric soil status: Unranked

1147468—Arnot-Lordstown-Rock outcrop complex, 15 to 35 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Arnot and similar soils: 45 percent Lordstown and similar soils: 40 percent

Rock outcrop: 15 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Mountains Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 15 to 35 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North

Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam Bhs—3 to 4 inches; fine sandy loam Bw1—4 to 12 inches; very gravelly loam

Bw2—12 to 17 inches; extremely gravelly loam

2R-17 to 80 inches; bedrock

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 15 to 35 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from conglomerate Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility)

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bw1—3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C-22 to 36 inches; very gravelly fine sandy loam

2R-36 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Parent material: Conglomerate

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

1147469—Arnot-Lordstown-Rock outcrop complex, 35 to 60 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Arnot and similar soils: 60 percent Lordstown and similar soils: 25 percent

Rock outcrop: 15 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Loamy till derived from conglomerate

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam
Bhs—3 to 4 inches; fine sandy loam
Bw1—4 to 12 inches; very gravelly loam
Bw2—12 to 17 inches; extremely gravelly loam
2R—17 to 80 inches; bedrock

Description of Lordstown Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: Mountains Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank Slope: 35 to 60 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from conglomerate Restrictive feature(s): Lithic bedrock at a depth of 20 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bw1—3 to 5 inches; loam

Bw2—5 to 17 inches; gravelly loam Bw3—17 to 22 inches; gravelly loam

C-22 to 36 inches; very gravelly fine sandy loam

2R—36 to 80 inches; bedrock

Description of Rock Outcrop

Setting

Landscape: Mountains
Landform: Ground moraines

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountain flank

Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Parent material: Conglomerate

Restrictive feature(s): Lithic bedrock at the surface

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

Typical Profile

R-0 to 80 inches; bedrock

1147470—Atherton mucky silt loam, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 49.2 to 1,499 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Atherton, very poorly drained, and similar soils: 60 percent Atherton, poorly drained, and similar soils: 30 percent

Dissimilar minor components: 10 percent

Description of Atherton, Very Poorly Drained, Soil

Soil Classification

Fine-silty, mixed, active, nonacid, mesic Aeric Endoaquepts

Settina

Landscape: River valleys Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Medium

Parent material: Postglacial fine-silty alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 10.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material Oe—2 to 4 inches; moderately decomposed plant material

Soil Survey of Delaware Water Gap National Recreation Area

A—4 to 8 inches; mucky silt loam
Bg1—8 to 10 inches; silt loam
Bg2—10 to 18 inches; silt loam
Bg3—18 to 29 inches; silt loam
BC1—29 to 32 inches; silt loam
BC2—32 to 41 inches; silt loam
C1—41 to 45 inches; fine sandy loam

C2-45 to 50 inches; loam

C3—50 to 60 inches; very fine sandy loam C4—60 to 70 inches; fine sandy loam

Description of Atherton, Poorly Drained, Soil

Soil Classification

Fine-silty, mixed, active, nonacid, mesic Aeric Endoaquepts

Setting

Landscape: River valleys Landform: Depressions

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Medium

Parent material: Postglacial fine-silty alluvium

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: At the surface to a depth of 6 inches (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

A—0 to 6 inches; loam Bg1—6 to 12 inches; loam Bg2—12 to 30 inches; loam

2Cg1—30 to 40 inches; sandy clay loam 2Cg2—40 to 60 inches; sandy clay loam

Minor Components

Aeric Endoaquepts, postglacial alluvium

Percent of map unit: 10 percent Landform: Inner terraces

Geomorphic position (two-dimensional): Toeslope

Geomorphic position (three-dimensional): Tread

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147471—Catden mucky peat, 0 to 2 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Catden and similar soils: 85 percent Dissimilar minor components: 15 percent

Description of Catden Soil

Soil Classification

Euic, mesic Typic Haplosaprists

Setting

Landscape: Till plains Landform: Depressions Slope: 0 to 3 percent Down-slope shape: Concave

Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Very low

Parent material: Herbaceous and/or woody organic material Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very high (about 26.8 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

Oe—0 to 2 inches; mucky peat

Oa1-2 to 13 inches; muck

Oa2—13 to 20 inches; woody muck

Oa3—20 to 32 inches; muck Oa4—32 to 60 inches; muck

Minor Components

Alden

Percent of map unit: 13 percent

Landform: Depressions
Aspect (representative): North
Aspect (range): All aspects
Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Concave Hydric soil status: Yes

Wallkill

Percent of map unit: 2 percent

Landform: Flood plains

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Concave Across-slope shape: Linear Hydric soil status: Yes

1147474—Chippewa silt loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,000 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Chippewa, extremely stony, and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Chippewa, Extremely Stony, Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Fragiaquepts

Setting

Landscape: Drumlin fields
Landform: Interdrumlins
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Aquic

Properties and Qualities

Runoff: Very high

Parent material: Fine-loamy till derived from limestone, sandstone, and shale

Restrictive feature(s): Fragipan at a depth of 8 to 20 inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Poorly drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: Yes Hydrologic soil group: D

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 4 inches; silt loam
Eg—4 to 8 inches; silt loam
Bg—8 to 13 inches; silt loam
Bgx1—13 to 21 inches; silt loam
Bgx2—21 to 29 inches; silt loam
Cg1—29 to 34 inches; silt loam

Cg2—34 to 60 inches; fine sandy loam

Minor Components

Alden, extremely stony

Percent of map unit: 10 percent

Landform: Interdrumlins
Aspect (representative): North
Aspect (range): All aspects
Slope: 0 to 8 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Venango, extremely stony

Percent of map unit: 10 percent

Landform: Drumlins

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

1147475—Colonie loamy fine sand, 0 to 3 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Colonie and similar soils: 80 percent Dissimilar minor components: 20 percent

Description of Colonie Soil

Soil Classification

Mixed, mesic Lamellic Udipsamments

Setting

Landscape: River valleys
Landform: Outer terraces
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Postglacial sandy alluvium, sandy eolian deposits, and/or glaciofluvial

deposits

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

A—0 to 2 inches; loamy fine sand Ap—2 to 11 inches; loamy fine sand E—11 to 24 inches; fine sand

E and Bt1—24 to 40 inches; fine sand E and Bt2—40 to 62 inches; fine sand

Minor Components

Delaware

Percent of map unit: 10 percent Landform: Outer terraces Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 10 percent Landform: Outer terraces Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147478—Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Delaware, rarely flooded, and similar soils: 80 percent

Dissimilar minor components: 20 percent

Description of Delaware, Rarely Flooded, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys
Landform: Terraces
Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial coarse-loamy alluvium Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.2 percent linear extensibility)

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

Ap1—1 to 4 inches; fine sandy loam
Ap2—4 to 11 inches; fine sandy loam
Bw1—11 to 20 inches; fine sandy loam
Bw2—20 to 33 inches; fine sandy loam
BC—33 to 41 inches; fine sandy loam
C1—41 to 56 inches; fine sandy loam

C2-56 to 60 inches; loam

Minor Components

Colonie

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Unadilla

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147482—Fredon-Halsey complex, 0 to 3 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Fredon, very stony, and similar soils: 50 percent Halsey, very stony, and similar soils: 40 percent Dissimilar minor components: 10 percent

Description of Fredon, Very Stony, Soil

Soil Classification

Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic Aeric Endoaquepts

Setting

Landscape: Outwash plains
Landform: Drainageways
Slope: 0 to 3 percent
Down-slope shape: Linear
Across-slope shape: Concave
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Aquic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone, sandstone, and shale

Restrictive feature(s): Strongly contrasting textural stratification at a depth of 22 to 40

inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 6 to 18 inches (perched)

Drainage class: Somewhat poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: No Hydrologic soil group: D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; silt loam Bw1—8 to 14 inches; silt loam Bw2—14 to 18 inches; loam Bw3—18 to 23 inches; loam

2C1—23 to 31 inches; extremely gravelly loamy coarse sand

2C2—31 to 36 inches; extremely gravelly coarse sand 2C3—36 to 45 inches; very gravelly coarse sand 2C4—45 to 55 inches; extremely gravelly coarse sand 2C5—55 to 60 inches; year, gravelly coarse sand

2C5—55 to 60 inches; very gravelly coarse sand

Description of Halsey, Very Stony, Soil

Soil Classification

Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic Typic Humaquepts

Setting

Landscape: Outwash plains Landform: Drainageways Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Concave Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Aquic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy over sandy and gravelly glaciofluvial deposits derived

from limestone, sandstone, and shale

Restrictive feature(s): Strongly contrasting textural stratification at a depth of 20 to 40

inches

Frequency of flooding: None Frequency of ponding: Frequent

Depth to water table: At the surface (perched)

Drainage class: Very poorly drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 5w

Hydric soil status: Yes Hydrologic soil group: B/D

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 5 inches; silt loam A2—5 to 11 inches; silt loam Bg—11 to 20 inches; silt loam

2Cg1-20 to 25 inches; loamy sand

2Cg2—25 to 35 inches; very gravelly coarse sand 2Cg3—35 to 49 inches; very gravelly coarse sand 2Cg4—49 to 56 inches; extremely gravelly coarse sand 2Cg5—56 to 60 inches; extremely gravelly coarse sand

Minor Components

Hero, very stony

Percent of map unit: 10 percent

Landform: Terraces

Aspect (representative): North Aspect (range): All aspects Slope: 0 to 3 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147485—Hazen-Hoosic complex, 3 to 8 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Hazen, very stony, and similar soils: 60 percent Hoosic, very stony, and similar soils: 35 percent

Dissimilar minor components: 5 percent

Description of Hazen, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Mollic Hapludalfs

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy glaciofluvial deposits derived from limestone.

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap-1 to 10 inches; loam

Bt—10 to 18 inches; sandy loam

2C1—18 to 29 inches; very stony loamy coarse sand 2C2—29 to 41 inches; very gravelly coarse sand 2C3—41 to 60 inches; extremely gravelly coarse sand

Description of Hoosic, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Humic Dystrudepts

Setting

Landscape: Outwash plains

Landform: Valley trains
Slope: 3 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap-1 to 9 inches; gravelly loam

Bw—9 to 21 inches; very gravelly coarse sandy loam

2C1—21 to 27 inches; extremely gravelly loamy coarse sand

2C2—27 to 37 inches; extremely gravelly coarse sand 2C3—37 to 49 inches; extremely gravelly coarse sand 2C4—49 to 60 inches; extremely gravelly coarse sand

Minor Components

Otisville, very stony

Percent of map unit: 5 percent

Landform: Valley trains

Aspect (representative): North Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147490—Hoosic-Hazen complex, 8 to 15 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,745 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Hoosic, very stony, and similar soils: 60 percent Hazen, very stony, and similar soils: 30 percent Dissimilar minor components: 10 percent

Description of Hoosic, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Humic Dystrudepts

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap-1 to 9 inches; gravelly loam

Bw-9 to 21 inches; very gravelly coarse sandy loam

2C1—21 to 27 inches; extremely gravelly loamy coarse sand

2C2—27 to 37 inches; extremely gravelly coarse sand

2C3—37 to 49 inches; extremely gravelly coarse sand

2C4—49 to 60 inches; extremely gravelly coarse sand

Description of Hazen, Very Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Mollic Hapludalfs

Setting

Landscape: Outwash plains

Landform: Valley trains
Slope: 8 to 15 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Coarse-loamy glaciofluvial deposits derived from limestone,

sandstone, and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap—1 to 10 inches; loam

Bt—10 to 18 inches; sandy loam

2C1—18 to 29 inches; very stony loamy coarse sand 2C2—29 to 41 inches; very gravelly coarse sand 2C3—41 to 60 inches; extremely gravelly coarse sand

Minor Components

Colonie, very stony

Percent of map unit: 5 percent

Landform: Valley trains

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Otisville, very stony

Percent of map unit: 5 percent

Landform: Valley trains

Aspect (representative): North Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147491—Hoosic-Otisville complex, 25 to 60 percent slopes, very stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Hoosic, very stony, and similar soils: 50 percent Otisville, very stony, and similar soils: 40 percent Dissimilar minor components: 10 percent

Description of Hoosic, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Humic Dystrudepts

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 25 to 60 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Somewhat excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 4.5 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

Ap—1 to 9 inches; gravelly loam

Bw-9 to 21 inches; very gravelly coarse sandy loam

2C1—21 to 27 inches; extremely gravelly loamy coarse sand

2C2—27 to 37 inches; extremely gravelly coarse sand

2C3—37 to 49 inches; extremely gravelly coarse sand 2C4—49 to 60 inches; extremely gravelly coarse sand

Description of Otisville, Very Stony, Soil

Soil Classification

Sandy-skeletal, mixed, mesic Typic Udorthents

Setting

Landscape: Outwash plains
Landform: Valley trains
Slope: 25 to 60 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Glaciofluvial deposits derived from sandstone and shale

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches Drainage class: Excessively drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 2.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: A

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; gravelly sandy loam

Bw1—2 to 7 inches; very gravelly loamy sand

Bw2—7 to 11 inches; very gravelly loamy coarse sand BC—11 to 19 inches; very gravelly loamy coarse sand C1—19 to 31 inches; extremely gravelly coarse sand C2—31 to 43 inches; extremely gravelly coarse sand C3—43 to 60 inches; stratified sand to loamy sand

Minor Components

Hazen, very stony

Percent of map unit: 10 percent

Landform: Valley trains

Aspect (representative): North Aspect (range): All aspects Slope: 25 to 60 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147492—Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 695 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Lackawanna, extremely stony, and similar soils: 85 percent

Dissimilar minor components: 15 percent

Description of Lackawanna, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Mountains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Coarse-loamy till derived from shale and/or coarse-loamy till derived

from sandstone and siltstone

Restrictive feature(s): Fragipan at a depth of 14 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 6.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Vegetation

Existing plants: Red maple, sedge, rare clubmoss, and northern red oak

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; cobbly fine sandy loam E—3 to 7 inches; cobbly fine sandy loam

Soil Survey of Delaware Water Gap National Recreation Area

Bhs—7 to 8 inches; cobbly fine sandy loam

Bw1—8 to 16 inches; stony loam Bw2—16 to 24 inches; stony loam

Bx1—24 to 29 inches; stony fine sandy loam Bx2—29 to 60 inches; very cobbly fine sandy loam

Minor Components

Wellsboro, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Oquaga, extremely stony

Percent of map unit: 5 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1147500—Wurtsboro loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,800 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 8 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects

Soil Survey of Delaware Water Gap National Recreation Area

Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Coarse-loamy till derived from sandstone Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 2 inches; slightly decomposed plant material

A-2 to 3 inches; loam

E—3 to 5 inches; fine sandy loam Bhs—5 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam Bx1—24 to 30 inches; gravelly sandy loam Bx2—30 to 60 inches; gravelly sandy loam

Minor Components

Swartswood, extremely stony

Percent of map unit: 10 percent Landform: Ground moraines Aspect (representative): North Aspect (range): All aspects Slope: 0 to 8 percent Down-slope shape: Convex Across-slope shape: Linear

1147501—Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Hydric soil status: No

Elevation: 400 to 1,100 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 60 percent Swartswood, extremely stony, and similar soils: 40 percent

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains

Landform: Ground moraines

Slope: 0 to 8 percent

Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; fine sandy loam E—3 to 4 inches; fine sandy loam Bhs—4 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam Bx1—24 to 33 inches; gravelly sandy loam Bx2—33 to 60 inches; gravelly sandy loam

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 0 to 8 percent

Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loam

E—2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

1147502—Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,100 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 60 percent Swartswood, extremely stony, and similar soils: 40 percent

Description of Wurtsboro, extremely stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains Landform: Ground moraines Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Soil Survey of Delaware Water Gap National Recreation Area

Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; fine sandy loam E—3 to 4 inches; fine sandy loam Bhs—4 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam Bx1—24 to 33 inches; gravelly sandy loam Bx2—33 to 60 inches; gravelly sandy loam

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

1147527—Udorthents-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Udorthents and similar soils: 60 percent

Urban land: 40 percent

Description of Udorthents

Soil Classification

Udorthents

Setting

Landscape: Uplands
Landform: Low hills
Slope: 0 to 8 percent
Down-slope shape: Linear
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Fill and/or disturbed soil material Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: No Hydrologic soil group: D

Typical Profile

A-0 to 12 inches; loam

C-12 to 72 inches; loamy sand

Description of Urban Land

Setting

Landscape: Uplands Landform: Low hills

Landform position (three-dimensional): Lower third of mountain flank

Slope: 0 to 3 percent

Down-slope shape: Linear, convex Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects

Properties and Qualities

Runoff: Very high

Parent material: Buildings, pavement, and other impervious surfaces over fill and/or

disturbed soil material

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: Unranked Hydrologic soil group: D

1147532—Udorthents, 0 to 8 percent slopes, smoothed

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 1,495 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Udorthents and similar soils: 100 percent

Description of Udorthents

Soil Classification

Udorthents

Setting

Landscape: Uplands Landform: Low hills

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): North Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very low

Parent material: Fill and/or disturbed soil material Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.0 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 8.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3w

Hydric soil status: No Hydrologic soil group: D

Typical Profile

A-0 to 12 inches; loam

C-12 to 72 inches; loamy sand

1147533—Wurtsboro-Swartswood complex, 15 to 35 percent slopes, extremely stony

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill Mountains

Elevation: 400 to 1,100 feet

Mean annual precipitation: 30 to 64 inches Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 131 to 178 days

Map Unit Composition

Wurtsboro, extremely stony, and similar soils: 80 percent Swartswood, extremely stony, and similar soils: 20 percent

Description of Wurtsboro, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North

Soil Survey of Delaware Water Gap National Recreation Area

Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 17 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 15 to 26 inches (perched)

Drainage class: Moderately well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; fine sandy loam E—3 to 4 inches; fine sandy loam Bhs—4 to 6 inches; fine sandy loam Bw1—6 to 18 inches; sandy loam

Bw2—18 to 24 inches; gravelly sandy loam Bx1—24 to 33 inches; gravelly sandy loam Bx2—33 to 60 inches; gravelly sandy loam

Description of Swartswood, Extremely Stony, Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Setting

Landscape: Till plains
Landform: Ground moraines
Slope: 15 to 35 percent
Down-slope shape: Convex
Across-slope shape: Linear
Aspect (representative): North
Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Bouldery, quartzose, coarse-loamy drift derived from conglomerate

Restrictive feature(s): Fragipan at a depth of 20 to 36 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 0.1 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Oi-0 to 1 inch; slightly decomposed plant material

A-1 to 2 inches; loam

E-2 to 3 inches; fine sandy loam

Bhs—3 to 4 inches; gravelly fine sandy loam Bw—4 to 21 inches; gravelly fine sandy loam Bx1—21 to 32 inches; gravelly sandy loam Bx2—32 to 60 inches; gravelly sandy loam

1948749—Arnot channery silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 295 to 1,800 feet

Mean annual precipitation: 35 to 48 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 190 days

Map Unit Composition

Arnot and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope, nose slope

Slope: 3 to 8 percent Down-slope shape: Convex Across-slope shape: Convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Glacial till derived from sedimentary rock

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3s

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

Ap—0 to 8 inches; channery silt loam Bw—8 to 16 inches; very channery silt loam

2R—16 to 26 inches; bedrock

Minor Components

Bedington

Percent of map unit: 5 percent Landform: Shale hillslopes

Geomorphic position (two-dimensional): Summit Geomorphic position (three-dimensional): Interfluve

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1948750—Arnot channery silt loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 295 to 1,800 feet

Mean annual precipitation: 35 to 48 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 190 days

Map Unit Composition

Arnot and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope, nose slope

Slope: 8 to 15 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Glacial till derived from sedimentary rock

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

Ap—0 to 8 inches; channery silt loam Bw—8 to 16 inches; very channery silt loam

2R—16 to 26 inches; bedrock

Minor Components

Brinkerton

Percent of map unit: 5 percent

Landform: Depressions

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Head slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

Wurtsboro

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1948751—Arnot channery silt loam, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 295 to 1,800 feet

Mean annual precipitation: 35 to 48 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 110 to 190 days

Map Unit Composition

Arnot and similar soils: 90 percent

Dissimilar minor components: 10 percent

Description of Arnot Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope, nose slope

Slope: 15 to 25 percent
Down-slope shape: Convex
Across-slope shape: Convex
Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Glacial till derived from sedimentary rock

Restrictive feature(s): Lithic bedrock at a depth of 10 to 20 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 1.9 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6e

Hydric soil status: No Hydrologic soil group: C/D

Typical Profile

Ap—0 to 8 inches; channery silt loam Bw—8 to 16 inches; very channery silt loam

2R—16 to 26 inches; bedrock

Minor Components

Brinkerton

Percent of map unit: 5 percent

Landform: Depressions

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Head slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: No

Wurtsboro

Percent of map unit: 5 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1948774—Conotton gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 620 to 905 feet

Mean annual precipitation: 32 to 45 inches Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 133 to 193 days

Map Unit Composition

Conotton and similar soils: 90 percent

Description of Conotton Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Hapludalfs

Setting

Landscape: Outwash plains Landform: Stream terraces

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Riser, tread

Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Stratified sand and gravel outwash Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 5

Available water capacity: Low (about 5.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 9 inches; gravelly loam Bt—9 to 45 inches; very gravelly loam

C—45 to 80 inches; stratified very gravelly sand to very gravelly loamy coarse sand

1948775—Conotton gravelly loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 620 to 905 feet

Mean annual precipitation: 32 to 45 inches Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 133 to 193 days

Map Unit Composition

Conotton and similar soils: 95 percent

Description of Conotton Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Hapludalfs

Setting

Landscape: Outwash plains Landform: Stream terraces

Landform position (two-dimensional): Backslope, footslope Landform position (three-dimensional): Riser, tread

Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Stratified sand and gravel outwash

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 5

Available water capacity: Low (about 5.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 9 inches; gravelly loam Bt—9 to 45 inches; very gravelly loam

C—45 to 80 inches; stratified very gravelly sand to very gravelly loamy coarse sand

1948776—Conotton gravelly loam, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 620 to 905 feet

Mean annual precipitation: 32 to 45 inches Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 133 to 193 days

Map Unit Composition

Conotton and similar soils: 95 percent

Description of Conotton Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Hapludalfs

Setting

Landscape: Outwash plains Landform: Stream terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Riser, tread

Slope: 15 to 25 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Stratified sand and gravel outwash Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None

Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 5

Available water capacity: Low (about 5.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 6e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 9 inches; gravelly loam Bt—9 to 45 inches; very gravelly loam

C-45 to 80 inches; stratified very gravelly sand to very gravelly loamy coarse sand

1948777—Conotton gravelly loam, 25 to 65 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 620 to 905 feet

Mean annual precipitation: 32 to 45 inches Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 133 to 193 days

Map Unit Composition

Conotton and similar soils: 95 percent

Description of Conotton Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Hapludalfs

Setting

Landscape: Outwash plains Landform: Stream terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Riser, tread

Slope: 25 to 65 percent Down-slope shape: Linear Across-slope shape: Linear Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Stratified sand and gravel outwash Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 5

Available water capacity: Low (about 5.4 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 9 inches; gravelly loam Bt—9 to 45 inches; very gravelly loam

C—45 to 80 inches; stratified very gravelly sand to very gravelly loamy coarse sand

1948797—Manlius channery silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Manlius and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Manlius Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope, interfluve, nose slope

Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Thin till derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility)

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2s

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 8 inches; channery silt loam Bw—8 to 24 inches; very channery silt loam C—24 to 32 inches; very channery silt loam

R—32 to 40 inches; bedrock

Minor Components

Arnot

Percent of map unit: 2 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Backslope

Geomorphic position (three-dimensional): Side slope, nose slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

Conotton

Percent of map unit: 2 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Loudonville

Percent of map unit: 2 percent

Landform: Till plains

Geomorphic position (three-dimensional): Head slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

Swartswood

Percent of map unit: 2 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects

Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 2 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1948802—Manlius channery silt loam, 8 to 15 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Manlius and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Manlius Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 8 to 15 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects
Soil temperature regime: Mesic
Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Thin till derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 3e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 8 inches; channery silt loam Bw—8 to 24 inches; very channery silt loam C—24 to 32 inches; very channery silt loam

R-32 to 40 inches; bedrock

Minor Components

Arnot

Percent of map unit: 2 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Backslope

Geomorphic position (three-dimensional): Side slope, nose slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

Conotton

Percent of map unit: 2 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Loudonville

Percent of map unit: 2 percent

Landform: Till plains

Geomorphic position (three-dimensional): Head slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

Swartswood

Percent of map unit: 2 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 2 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1948818—Manlius channery silt loam, 15 to 25 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 200 to 1,800 feet

Mean annual precipitation: 30 to 50 inches Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Manlius and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Manlius Soil

Soil Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Setting

Landform: Valley sides

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Slope: 15 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: High

Parent material: Thin till derived from shale

Restrictive feature(s): Lithic bedrock at a depth of 20 to 40 inches

Frequency of flooding: None

Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 3.2 inches)

Interpretive Groups

Land capability classification (nonirrigated): 4e

Hydric soil status: No Hydrologic soil group: C

Typical Profile

Ap—0 to 8 inches; channery silt loam Bw—8 to 24 inches; very channery silt loam C—24 to 32 inches; very channery silt loam

R-32 to 40 inches; bedrock

Minor Components

Arnot

Percent of map unit: 2 percent

Landform: Valley sides

Geomorphic position (two-dimensional): Backslope

Geomorphic position (three-dimensional): Side slope, nose slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Down-slope shape: Convex Across-slope shape: Convex

Hydric soil status: No

Conotton

Percent of map unit: 2 percent Landform: Stream terraces

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Riser, tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Loudonville

Percent of map unit: 2 percent

Landform: Till plains

Hydric soil status: No

Geomorphic position (three-dimensional): Head slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Convex Across-slope shape: Convex

Swartswood

Percent of map unit: 2 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 15 to 25 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 2 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 8 to 15 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1948832—Penargyl channery silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 295 to 2,095 feet

Mean annual precipitation: 34 to 50 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 130 to 190 days

Map Unit Composition

Penargyl and similar soils: 90 percent

Description of Penargyl Soil

Soil Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

Setting

Landscape: Uplands Landform: Valley sides

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope

Slope: 3 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): Southeast Aspect (range): All aspects Soil temperature regime: Mesic

Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Colluvium derived from shale and siltstone and/or loamy glacial till

derived from sedimentary rock

Restrictive feature(s): Lithic bedrock at a depth of 72 to 99 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 10.7 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 12 inches; channery silt loam Bt—12 to 74 inches; cobbly silty clay loam C—74 to 80 inches; very channery loam

R-80 to 90 inches; bedrock

1948846—Phelps gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 1,000 to 1,800 feet

Mean annual precipitation: 30 to 48 inches Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Phelps and similar soils: 90 percent Dissimilar minor components: 10 percent

Description of Phelps Soil

Soil Classification

Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Glossaquic Hapludalfs

Setting

Landscape: Outwash plains

Landform: Terraces

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Tread

Slope: 3 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Medium

Parent material: Silty or loamy over glacial outwash

Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 18 to 24 inches Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Low (about 5.6 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap—0 to 10 inches; gravelly silt loam Bt—10 to 22 inches; gravelly loam BC—22 to 30 inches; gravelly clay loam

2C-30 to 79 inches; stratified very gravelly sand to loamy sand

Minor Components

Halsey

Percent of map unit: 4 percent

Landform: Flood plains

Geomorphic position (two-dimensional): Toeslope Geomorphic position (three-dimensional): Tread

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 0 to 2 percent

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil status: Yes

Swartswood

Percent of map unit: 4 percent

Landform: Hills

Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Wurtsboro

Percent of map unit: 2 percent

Landform: Hills

Geomorphic position (two-dimensional): Footslope Geomorphic position (three-dimensional): Base slope

Aspect (representative): Southeast

Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

1948855—Udorthents, loamy

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 295 to 1,600 feet

Mean annual precipitation: 34 to 50 inches Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 140 to 200 days

Map Unit Composition

Udorthents, loamy, and similar soils: 95 percent Dissimilar minor components: 5 percent

Description of Udorthents, Loamy

Soil Classification

Udorthents

Settina

Landscape: Uplands Landform: Ridges

Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Nose slope, side slope, interfluve

Slope: 0 to 8 percent

Down-slope shape: Linear, convex Across-slope shape: Linear, convex Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Graded areas of loamy sedimentary rock Restrictive feature(s): None within a depth of 60 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: About 12 to 36 inches Drainage class: Moderately well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Moderate (about 7.1 inches)

Interpretive Groups

Land capability classification (nonirrigated): 7s

Hydric soil status: No Hydrologic soil group: A/D

Typical Profile

A—0 to 5 inches; loam

C—5 to 40 inches; gravelly loam 2C—40 to 70 inches; loam

Minor Components

Bedington

Percent of map unit: 1 percent Landform: Shale hillslopes

Geomorphic position (two-dimensional): Summit Geomorphic position (three-dimensional): Interfluve

Aspect (representative): South Aspect (range): All aspects Slope: 0 to 3 percent

Down-slope shape: Convex, linear Across-slope shape: Linear, convex

Hydric soil status: No

Clarksburg

Percent of map unit: 1 percent Landform: Limestone valley flats

Geomorphic position (two-dimensional): Footslope, toeslope

Geomorphic position (three-dimensional): Base slope

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Concave, linear Across-slope shape: Linear, concave

Hydric soil status: No

Duffield

Percent of map unit: 1 percent

Landform: Hills

Geomorphic position (two-dimensional): Summit Geomorphic position (three-dimensional): Interfluve

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Linear Across-slope shape: Linear Hydric soil status: No

Lansdale

Percent of map unit: 1 percent Landform: Rolling hillsides

Geomorphic position (two-dimensional): Summit, shoulder, and backslope

Geomorphic position (three-dimensional): Side slope

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent Down-slope shape: Convex

Across-slope shape: Convex Hydric soil status: No

Readington

Percent of map unit: 1 percent

Landform: Red shale, siltstone, and sandstone hillslopes Geomorphic position (two-dimensional): Backslope, footslope

Geomorphic position (three-dimensional): Side slope, head slope, base slope

Aspect (representative): South Aspect (range): All aspects Slope: 3 to 8 percent

Down-slope shape: Linear, concave Across-slope shape: Linear, concave

Hydric soil status: No

1948989—Urban land-Delaware complex, 0 to 8 percent slopes

Map Unit Setting

Major land resource area (MLRA): 140—Glaciated Allegheny Plateau and Catskill

Mountains

Elevation: 400 to 600 feet

Mean annual precipitation: 35 to 50 inches Mean annual air temperature: 44 to 57 degrees F

Frost-free period: 110 to 200 days

Map Unit Composition

Urban land: 65 percent

Delaware and similar soils: 25 percent

Description of Urban Land

Setting

Landscape: Mountains

Landform: Valleys, ridges, and hills

Landform position (two-dimensional): Summit, footslope

Slope: 0 to 8 percent Down-slope shape: Linear Across-slope shape: Linear

Aspect (representative): Southeast

Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Very high

Parent material: Pavement, buildings, and other artificially covered areas Restrictive feature(s): Lithic bedrock at a depth of 10 to 100 inches

Frequency of flooding: None Frequency of ponding: None

Depth to water table: More than 72 inches

Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: Very low (about 0.0 inches)

Interpretive Groups

Land capability classification (nonirrigated): 8s

Hydric soil status: No

Typical Profile

C-0 to 6 inches; variable

Description of Delaware Soil

Soil Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Setting

Landscape: River valleys

Landform: Low to middle river terraces

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Tread

Slope: 0 to 8 percent

Down-slope shape: Linear, convex

Across-slope shape: Linear, convex Aspect (representative): South Aspect (range): All aspects Soil temperature regime: Mesic Soil moisture class: Udic

Properties and Qualities

Runoff: Low

Parent material: Postglacial alluvium derived from sandstone and shale Restrictive feature(s): Lithic bedrock at a depth of 72 to 99 inches

Frequency of flooding: Rare Frequency of ponding: None

Depth to water table: More than 72 inches

Drainage class: Well drained

Shrink-swell potential: Low (about 1.5 percent linear extensibility) Calcium carbonate equivalent (maximum weight percentage): 0

Available water capacity: High (about 9.3 inches)

Interpretive Groups

Land capability classification (nonirrigated): 2e

Hydric soil status: No Hydrologic soil group: B

Typical Profile

Ap-0 to 10 inches; loam

Bw—10 to 40 inches; very fine sandy loam

C-40 to 87 inches; loamy fine sand

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in Delaware Water Gap National Recreation Area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils as rangeland and as sites for buildings, sanitary facilities, highways and other transportation systems, and recreational facilities. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the park. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the park for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited*, *slightly limited*, *somewhat limited*, and *very limited*. The suitability ratings are expressed as *well suited*, *moderately well suited*, *poorly suited*, and *unsuited* or as *good*, *fair*, and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact

on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels=capability class, subclass, and unit (USDA–SCS, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally

designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4. These units are not given in all soil surveys.

The capability classification of map units in this park is given in the section "Detailed Soil Map Units" and in table 2.

Prime Farmland and Other Important Farmlands

Table 3 lists the map units in the park that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime farmland or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated

and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Hydric Soils

Table 4 lists the map unit components that are rated as hydric soils in the park. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; USDA–NRCS, 2010).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2010) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (USDA–NRCS, 2010).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

- 1. All Histels except for Folistels and Histosols except for Folists.
- 2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
- A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
 - B. are poorly drained or very poorly drained and have either:
- 1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
- 2) a water table at a depth of 0.5 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
- 3) a water table at a depth of 1.0 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is less than 6.0 in/hr in any layer within a depth of 20 inches.
- 3. Soils that are frequently ponded for periods of long or very long duration during the growing season.
- 4. Soils that are frequently flooded for periods of long or very long duration during the growing season.

Landscape, Landform, and Parent Material

Table 5 displays information about the relationships between soils and landscapes, landforms, and parent materials.

Percent of map unit is the extent of the named soil in the map unit.

Slope is the inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. The table shows the low and high range of slope for the named component or soil.

Elevation is the height of an object or area on the earth's surface in reference to a fixed reference point, such as mean sea level. The typical low and high range of elevation is displayed for each soil.

MAP is the mean annual precipitation for areas of the soil in the map unit.

Landscape refers to the broad shape of the earth in the area where the soil occurs. Examples are a valley and a mountain.

Landform is a specific shape of the earth in the area where a soil typically occurs. Examples are a valley bottom and a mountain summit.

Parent material is the material in which soils formed. Examples are the underlying geological material (including bedrock), a surficial deposit (such as eolian sand), and organic material. Soils inherit their chemical and physical properties from the parent material.

Land Management

In tables 6a through 6d, interpretive ratings are given for various aspects of land management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified land management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One

or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified land management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for *fire damage* and *seedling mortality* are expressed as low, moderate, and high. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

Rating class terms for *hazard of erosion* are expressed as slight, moderate, severe, and very severe. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for erosion is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for land management practices.

Table 6a

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of planting equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Table 6b

Ratings in the column *hazard of erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in areas where 50 to 75 percent of the surface has been exposed by different kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column hazard of erosion on roads and trails are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of slight indicates that little or no erosion is likely; moderate indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and severe indicates that significant

erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Table 6c

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Table 6d

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreation

The soils of the park are rated in tables 7a and 7b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public

sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in the tables can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, and water management.

Table 7a

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Table 7b

Foot traffic and equestrian trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Mountain bike and off-road vehicle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, depth to a water table, ponding, slope, flooding, and texture of the surface layer.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, landscaping, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for septic tank absorption fields and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, ponds, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil map, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Dwellings and Small Commercial Buildings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 8 shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Roads and Streets, Shallow Excavations, and Landscaping

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 9 shows the degree and kind of soil limitations that affect local roads and streets, shallow excavations, and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of

flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Landscaping requires soils on which turf, trees, and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sewage Disposal

Table 10 shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (Ksat) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a Ksat rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Source of Gravel and Sand

Table 11 gives information about the soils as potential sources of gravel and sand. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and sand are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. Only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of gravel or sand are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains gravel or sand, the soil is considered a likely source regardless of thickness. The assumption is that the gravel or sand layer below the depth of observation exceeds the minimum thickness. The ratings are for the whole soil, from the surface to a depth of about 6 feet.

The soils are rated *good*, *fair*, or *poor* as potential sources of gravel and sand. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of gravel or sand. The number 0.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

Source of Reclamation Material, Roadfill, and Topsoil

Table 12 gives information about the soils as potential sources of reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated *good, fair,* or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the table. Numerical ratings between 0.00 and 0.99 are given after the specified features. These numbers indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments. The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Ponds and Embankments

Table 13 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil

has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the saturated hydraulic conductivity (Ksat) of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, Ksat of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

Engineering Properties

Table 14 gives the engineering classifications and the range of engineering properties for the layers of each soil in the park.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement,

the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Soil Properties

Table 15 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the park. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller. If a range is not present, a singular representative value is shown.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (K_{sat}), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at ¹/₃- or ¹/₁₀-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil

properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability $(K_{sal'})$ refers to the ability of a soil to transmit water or air. The estimates in the table indicate the rate of water movement, in micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Shrink-swell potential is the potential of the soil to expand and contract with a loss or gain in moisture. Linear extensibility is used to determine the shrink-swell potential of soils. Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at ¹/₃- or ¹/₁₀-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

The shrink-swell potential is *low* if the soil has a linear extensibility of less than 3 percent; *moderate* if 3 to 6 percent; *high* if 6 to 9 percent; and *very high* if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion Properties

Table 16 shows estimates of some erosion factors that affect a soil's potential for different uses. These estimates are given for each layer of every soil for K factors and are given as one rating for the entire soil for the T factor. Values are reported for each soil in the park. Estimates are based on field observations and on test data for these and similar soils.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and K_{sat} . Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

The procedure for determining the Kf factor is outlined in Agriculture Handbook 703, "Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE)" (USDA–ARS, 1997).

Depth to the upper and lower boundaries of each layer is indicated.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments. In horizons where total rock fragments are 15 percent or more, by volume, the Kw factor is always less than the Kf factor.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size. Soil horizons that do not have rock fragments are assigned equal Kw and Kf factors.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Total Soil Carbon

Table 17 gives estimates of total soil carbon. Soil carbon occurs as organic and inorganic carbon.

Soil organic carbon (SOC) is carbon (C) in soil that originated from a biological source, such as plants, animals, or microorganisms. SOC is found in both organic and mineral soil layers. The term "soil organic carbon" refers only to the carbon occurring in soil organic matter (SOM). Soil organic carbon makes up about one-half the weight of soil organic matter. The rest of SOM is mostly oxygen, nitrogen, and hydrogen.

Soil inorganic carbon (SIC) is carbon found in soil carbonates, typically as calcium carbonate layers in the soil or as clay-sized fractions throughout the soil. Carbonates in soils are most common in areas where evaporation rates exceed precipitation, as is the case in most desert environments. Typically, the carbonates accumulated from carbonatic dust or from solution during periods of wetter climates. Soil inorganic carbon also occurs in soils that formed in marl in all regions of the country.

The SOC and SIC contents are reported in kilograms per square meter to a depth of 2 meters or to a representative depth of either hard bedrock or a cemented horizon. The SOC and SIC values are on a whole soil basis, corrected for rock fragments.

SOC can be an indicator of overall soil fertility and soil quality that affects ecosystem function. SOM is the main reservoir for most plant nutrients, such as phosphorus and nitrogen. Managing for SOC by managing for SOM increases the content of these elements and improves soil resiliency.

Soil organic matter binds soil particles together and thus increases soil porosity and water infiltration and allows better root penetration and waterflow into the soil. Greater inflow of water reduces the hazard of erosion and the rate of surface water runoff.

Greater SOC levels improve not only soil quality but also the quality of air and water. Soil acts as a filter and improves water quality. Fertile soils that support plant life remove CO₂ from the atmosphere and increase oxygen levels through photosynthesis. Maintaining the level of soil organic carbon reduces C release into the atmosphere and thus can lessen the effects of global warming.

SIC influences the types of plants that will grow. High SIC levels are commonly associated with a higher soil pH, which limits the types of plants that will thrive.

Like SOM, soil carbonates, the source of SIC, also bind soil particles together. They fill voids in the soil and thus can reduce soil porosity. Compacted soil carbonates may restrict root penetration and waterflow into the soil.

Chemical Soil Properties

Table 18 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable cations plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil.

Water Features

Table 19 gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 20 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Kinds of restrictions include bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. If no restriction exists, the

table reports "No restriction." Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (K_{sat}), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

Soils are named and classified on the basis of physical and chemical properties in their horizons (layers). Color, texture, structure, and other properties of the soil to a depth of 2 meters are used to key the soil into a classification system. This system helps people to use soil information and also provides a common language for scientists.

Soils and their horizons differ from one another, depending on how and when they formed. Soil scientists use five soil-forming factors to help predict where different soils may occur. The degree and expression of the soil horizons reflect the extent of interaction of the soil-forming factors with one or more of the soil-forming processes (Simonson, 1959).

When mapping soils, a soil scientist looks for areas with similar soil-forming factors to find similar soils. The properties of the soils are described. Soils are given taxonomic names based on the properties. Soils are classified, mapped, and interpreted on the basis of various kinds of soil horizons and their arrangement. The distribution of soil orders corresponds with the general patterns of the soil-forming factors within the park.

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2010). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. The categories are defined in the following paragraphs.

ORDER. Soil taxonomy identifies 12 soil orders at the highest hierarchical level. The names for the orders and taxonomic soil properties relate to Greek, Latin, or other root words that reveal something about the soil. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. Sixty-four suborders are recognized at this level of classification. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. There are about 300 great groups. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Soil taxonomy identifies more than 2,400 subgroups. Each great group has a typic subgroup. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Other subgroups are intergrades or extragrades. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but

do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Ultic* identifies the subgroup that is more weathered than the typic great group. An example is Ultic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below traditional plow depth. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Ultic Hapludalfs.

SERIES. The soil series is the lowest category in the soil classification system. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Most parks are mapped to the series level. The names of soil series are selected by the soil scientists during the course of mapping. An example is the Loudonville series. The soils of the Loudonville series are fine-loamy, mixed, active, mesic Ultic Hapludalfs. The series names are commonly geographic place names. Because of access limitations and soil variability, some soils are only classified to the great group or subgroup level.

Table 21, "Taxonomic Classification of the Soils," indicates the order, suborder, great group, subgroup, and family of the soil series in the park. Table 22, "Taxonomic Classification Key," displays the classifications sorted by order.

Soil Series and Their Morphology

Included in this section are descriptions of 10 soils for which the typical pedon is within Delaware Water Gap National Recreation Area. The soils were described during the mapping of the county-based soil surveys. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993) and in the "Field Book for Describing and Sampling Soils" (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 2010). Following the pedon description is the range of important characteristics of the soils in the series.

Descriptions of the other soil series in the survey area are available online at http://soils.usda.gov/. Search for "official soil series descriptions."

Atherton Taxadjunct

Depth class: Very deep

Drainage class: Very poorly drained

Permeability: Moderate or moderately slow in the surface layer and subsoil; moderate

or moderately rapid in the substratum Parent material: Postglacial fine-silty alluvium

Landscape: River valleys Landform: Depressions

Associated soils: Aeric Endoaquepts and Atherton, poorly drained, soils

Slope: 0 to 3 percent

Taxonomic classification: Fine-silty, mixed, active, nonacid, mesic Aeric Endoaquepts

Typical Pedon

Atherton mucky silt loam, 0 to 3 percent slopes; Montague Township, Sussex County, Delaware Water Gap National Recreation Area; 6,336 feet northeast of the bridge on U.S. Route 206, about 1,850 feet west of County Route 521, and 1,320 feet south of field entrance road, in an abandoned pasture; USGS Milford, Pennsylvania-New Jersey topographic quadrangle; lat. 41 degrees 19 minutes 3.31 seconds N. and long. 74 degrees 46 minutes 56.47 seconds W.; NAD27.

- Oi—0 to 2 inches; black (10YR 2/1) slightly decomposed herbaceous plant material.
- Oe—2 to 4 inches; black (10YR 2/1) moderately decomposed herbaceous plant material.
- A—4 to 8 inches; very dark grayish brown (10YR 3/2) mucky silt loam; moderate fine granular structure; friable; many medium and fine roots; moderately acid (pH 5.9); clear wavy boundary.
- Bg1—8 to 10 inches; dark gray (10YR 4/1) silt loam; moderate fine granular structure; friable; many medium and fine roots; slightly acid (pH 6.3); clear wavy boundary.
- Bg2—10 to 18 inches; dark gray (10YR 4/1) silt loam; moderate medium subangular blocky structure parting to moderate fine granular; friable; many fine and common medium roots; slightly acid (pH 6.2); clear wavy boundary.
- Bg3—18 to 29 inches; olive gray (5Y 5/2) silt loam; massive; firm; few medium roots; few fine prominent brown (7.5YR 5/2) iron depletions with clear boundaries in the matrix; common medium prominent dark yellowish brown (10YR 3/6) iron accumulations with clear boundaries in the matrix; slightly acid (pH 6.2); gradual wavy boundary.
- BC1—29 to 32 inches; brown (7.5YR 5/3) silt loam; massive; firm; common medium prominent olive gray (5Y 5/2) iron depletions with clear boundaries in the matrix; few fine distinct strong brown (7.5YR 4/6) iron accumulations with clear boundaries in the matrix; few fine prominent black (10YR 2/1) manganese accumulations with sharp boundaries in the matrix; moderately acid (pH 6.0); gradual wavy boundary.
- BC2—32 to 41 inches; brown (7.5YR 5/4) silt loam; massive; firm; many medium prominent reddish gray (5YR 5/2) and few medium prominent greenish gray (5GY 5/1) iron depletions with clear boundaries in the matrix; common medium prominent yellowish red (5YR 5/6) iron accumulations with clear boundaries in the matrix; moderately acid (pH 6.0); gradual wavy boundary.
- C1—41 to 45 inches; yellowish brown (10YR 5/4) fine sandy loam; massive; firm; common medium prominent brown (7.5YR 5/2) iron depletions with clear boundaries in the matrix; few medium prominent brown (7.5YR 5/4) iron accumulations with clear boundaries in the matrix; moderately acid (pH 6.0); clear wavy boundary.
- C2—45 to 50 inches; brown (7.5YR 4/3) loam; massive; firm; many medium distinct gray (7.5YR 5/1) iron depletions with clear boundaries in the matrix; moderately acid (pH 6.0); clear wavy boundary.
- C3—50 to 60 inches; brown (7.5YR 4/2) very fine sandy loam; massive; firm; many coarse distinct dark yellowish brown (10YR 4/6) iron accumulations with clear boundaries in the matrix; moderately acid (pH 6.0); clear wavy boundary.
- C4—60 to 70 inches; brown (7.5YR 4/2) fine sandy loam; massive; friable; many coarse prominent dark brown (7.5YR 3/4) and many coarse distinct dark yellowish brown (10YR 4/6) iron accumulations with clear boundaries in the matrix; moderately acid (pH 6.0).

Range in Characteristics

Thickness of solum: 22 to 44 inches

Coarse fragments: 0 to 15 percent, by volume

Reaction: Strongly acid to neutral in the A horizon, moderately acid to slightly alkaline

in the Bg, BC, and C horizons; except where lime has been applied

O horizon (where present):

Color-black or dark brown

Texture—slightly to highly decomposed organic material

A horizon:

Color—hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 2 or less; or neutral in hue and value of 2 to 4

Texture (fine-earth fraction)—silt loam

Bg horizon:

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 to 4

Texture (fine-earth fraction)—silty clay loam, silt loam, loam, very fine sandy loam, or fine sandy loam

Redoximorphic features—iron depletions in shades of gray and iron concentrations in shades of brown

BC horizon:

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 to 4

Texture (fine-earth fraction)—silty clay loam, silt loam, loam, very fine sandy loam, or fine sandy loam

Redoximorphic features—iron depletions in shades of gray and iron concentrations in shades of brown

C horizon:

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 to 4

Texture (fine-earth fraction)—silty clay loam, silt loam, loam, very fine sandy loam, or fine sandy loam

Redoximorphic features—iron depletions in shades of gray and iron concentrations in shades of brown

The Atherton soil in the survey area is mapped as a taxadjunct to the Atherton series because the particle-size family of this soil is fine-silty rather than fine-loamy, which is the typical particle-size family of the Atherton series. Also, ranges for colors and textures differ from the typical ranges for the Atherton series. A poorly drained phase of the Atherton soil is recognized in map units 612732 and 1147470, Atherton mucky silt loam, 0 to 3 percent slopes. Depth to bedrock is greater than 70 inches

Colonie Series

Depth class: Very deep

Drainage class: Somewhat excessively drained

Permeability: Moderately rapid or rapid

Parent material: Postglacial sandy alluvium, sandy eolian deposits, and/or glaciofluvial

deposits

Landscape: River valleys Landform: Outer terraces

Associated soils: Delaware and Unadilla soils

Slope: 0 to 8 percent

Taxonomic classification: Mixed, mesic Lamellic Udipsamments

Typical Pedon

Colonie loamy fine sand, 3 to 8 percent slopes; Sandyston Township, Sussex County, Delaware Water Gap National Recreation Area; 3,168 feet north of the intersection of Old Mine Road and Van Ness Road, in a wooded area; USGS Culvers Gap topographic quadrangle; lat. 41 degrees 14 minutes 50.1 seconds N. and long. 74 degrees 50 minutes 37.1 seconds W.; NAD83.

- A—0 to 2 inches; dark brown (10YR 3/3) loamy fine sand; weak fine granular structure; very friable; many fine and common medium roots; slightly acid (pH 6.1); clear smooth boundary.
- Ap—2 to 11 inches; dark yellowish brown (10YR 3/4) loamy fine sand; weak medium and fine subangular blocky structure; very friable; common fine and medium roots; moderately acid (pH 5.8); clear smooth boundary.
- E—11 to 24 inches; strong brown (7.5YR 4/6) fine sand; weak medium subangular blocky structure; very friable; common medium and few coarse and fine roots; strongly acid (pH 5.3); gradual wavy boundary.
- E and Bt1—24 to 40 inches; strong brown (7.5YR 4/6) fine sand; weak medium subangular blocky structure; friable; few medium roots; several 2-millimeter-thick, wavy lamellae that are yellowish red (5YR 4/6) fine sandy loam; strongly acid (pH 5.3); gradual wavy boundary.
- E and Bt2—40 to 62 inches; yellowish brown (10YR 5/4) and dark yellowish brown (10YR 4/4) fine sand; weak medium and fine subangular blocky structure; very friable; several 2-millimeter-thick, wavy lamellae that are strong brown (7.5YR 4/6) fine sandy loam; strongly acid (pH 5.3).

Range in Characteristics

Thickness of solum: 40 to 75 inches Depth to bedrock: Greater than 62 inches Rock fragments: 0 to 5 percent, by volume

Reaction: Strongly acid to slightly acid in the A and E horizons, strongly acid to neutral in the E and Bt horizon, and moderately acid to neutral in the C horizon; except where lime has been applied

Other: In some pedons, contrasting layers of finer or coarser textured deposits are below a depth of 40 inches.

A and Ap horizons:

Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 or 3 Texture (fine-earth fraction)—loamy fine sand

E horizon:

Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6 Texture (fine-earth fraction)—fine sand or loamy fine sand

E and Bt horizon:

Color—hue of 5YR to 2.5Y, value of 3 to 6, and chroma of 3 to 6 Texture (fine-earth fraction)—fine sand to fine sandy loam

C horizon (where present):

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 4 Texture (fine-earth fraction)—fine sand or loamy fine sand

Delaware Series

Depth class: Very deep Drainage class: Well drained

Permeability: Moderately rapid in the surface layer and subsoil; rapid in the substratum

Parent material: Postglacial coarse-loamy alluvium (fig. 3)

Landscape: River valleys Landform: Terraces

Associated soils: Colonie and Unadilla soils

Slope: 0 to 8 percent

Taxonomic classification: Coarse-loamy, mixed, active, mesic Typic Dystrudepts



Figure 3.—A profile of a Delaware soil. The Delaware soils are very deep and well drained. They formed in postglacial alluvium deposited along the Delaware River in the Delaware Valley. Note the lack of rock fragments. Map units comprised of Delaware soils are rated as prime farmland. Depths on the tape are in inches (USDA-NRCS, 2009).

Typical Pedon

Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded; Pahaquarry Township, Warren County, Delaware Water Gap National Recreational Area, Depew Island Picnic Area; 2,050 feet northwest of the intersection of Old Mine Road and an access road, 500 feet northeast of the access road, in a crop field; USGS Bushkill topographic quadrangle; lat. 41 degrees 3 minutes 42.7 seconds N. and long. 75 degrees 0 minutes 32.8 seconds W.; NAD83.

- Oi—0 to 1 inch; black (10YR 2/1) slightly decomposed organic material.
- Ap1—1 to 4 inches; very dark grayish brown (10YR 3/2) fine sandy loam; moderate fine and medium granular structure; very friable; many fine roots; strongly acid (pH 5.3); abrupt smooth boundary.
- Ap2—4 to 11 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine subangular blocky structure parting to weak fine granular; very friable; common coarse, medium, and fine roots; strongly acid (pH 5.3); abrupt wavy boundary.
- Bw1—11 to 20 inches; dark yellowish brown (10YR 4/4) fine sandy loam; moderate fine and medium subangular blocky structure; very friable; strongly acid (pH 5.3); clear wavy boundary.
- Bw2—20 to 33 inches; brown (7.5YR 4/4) fine sandy loam; moderate fine and medium subangular blocky structure; very friable; strongly acid (pH 5.3); clear wavy boundary.
- BC—33 to 41 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine and medium subangular blocky structure; very friable; strongly acid (pH 5.3); clear wavy boundary.
- C1—41 to 56 inches; 60 percent dark yellowish brown (10YR 4/4) fine sandy loam and 40 percent brown (7.5YR 4/4) fine sandy loam; massive; very friable; strongly acid (pH 5.3); clear wavy boundary.
- C2—56 to 60 inches; brown (7.5YR 4/4) loam; massive; friable; strongly acid (pH 5.3).

Range in Characteristics

Thickness of solum: 30 to 60 inches Depth to bedrock: Greater than 74 inches Rock fragments: 0 to 5 percent, by volume

Reaction: Strongly acid to slightly acid, except where lime has been applied

O horizon (where present):

Color—black or dark brown

Texture—slightly or moderately decomposed plant material

Ap horizon:

Color—hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 to 4 Texture (fine-earth fraction)—fine sandy loam

Bw horizon:

Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 6 Texture (fine-earth fraction)—fine sandy loam

BC horizon:

Color—hue of 5YR to 10YR, value of 3 to 6, and chroma of 2 to 6 Texture (fine-earth fraction)—fine sandy loam

C horizon:

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 2 to 6 Texture (fine-earth fraction)—fine sandy loam to loamy sand

Lackawanna Series

Depth class: Very deep Drainage class: Well drained

Permeability: Moderate above the fragipan; slow in the fragipan

Parent material: Coarse-loamy till derived from red shale and/or red sandstone and

siltstone

Landscape: Mountains
Landform: Ground moraines

Associated components: Oquaga and Wellsboro soils and rock outcrop

Slope: 0 to 35 percent

Taxonomic classification: Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Typical Pedon

Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes, extremely stony; Pahaquarry Township, Warren County, Delaware Water Gap National Recreation Area; 3,168 feet west of the intersection of Brink Road and County Route 602, about 400 feet north of Brink Road, in a wooded area on the shoulder of Kittatinny Mountain; USGS Flatbrookville topographic quadrangle; lat. 41 degrees 3 minutes 45.59 seconds N. and long. 74 degrees 58 minutes 20.00 seconds W.; NAD83.

- Oi—0 to 2 inches; black (10YR 2/1) slightly decomposed organic material.
- A—2 to 3 inches; black (5YR 2.5/1) cobbly fine sandy loam; weak fine granular structure; friable; many fine and medium roots; 9 percent cobbles (red and gray subangular sandstone); 6 percent stones (red and gray subangular sandstone); 5 percent coarse gravel (red and gray subangular sandstone); extremely acid (pH 4.2); abrupt irregular boundary.
- E—3 to 7 inches; pinkish gray (5YR 6/2) cobbly fine sandy loam; weak medium subangular blocky structure parting to weak medium granular; friable; common fine and medium roots; 9 percent cobbles (red and gray subangular sandstone); 6 percent stones (red and gray subangular sandstone); 5 percent coarse gravel (red and gray subangular sandstone); extremely acid (pH 4.2); abrupt irregular boundary.
- Bhs—7 to 8 inches; dusky red (2.5YR 3/2) cobbly fine sandy loam; moderate medium subangular blocky structure; friable; common fine and medium roots; 9 percent cobbles (red and gray subangular sandstone); 7 percent coarse gravel (red and gray subangular sandstone); 6 percent stones (red and gray subangular sandstone); extremely acid (pH 4.4); abrupt broken boundary.
- Bw1—8 to 16 inches; reddish brown (5YR 5/4) stony loam; moderate medium subangular blocky structure; friable; common fine, medium, and coarse roots; 10 percent coarse gravel (red and gray subangular sandstone); 7 percent cobbles (red and gray subangular sandstone); 5 percent stones (red and gray subangular sandstone); strongly acid (pH 5.3); clear smooth boundary.
- Bw2—16 to 24 inches; reddish brown (5YR 5/4) stony loam; moderate medium platy structure; firm; common fine roots; 10 percent coarse gravel (red and gray subangular sandstone); 7 percent cobbles (red and gray subangular sandstone); 5 percent stones (red and gray subangular sandstone); strongly acid (pH 5.3); clear smooth boundary.
- Bx1—24 to 29 inches; dusky red (2.5YR 4/4) stony fine sandy loam; few medium faint weak red (2.5YR 5/2) iron depletions with clear boundaries on vertical faces of prisms; strong medium platy structure; very firm; brittle; few faint patchy dusky red (2.5YR 4/4) clay films on surfaces along pores; 20 percent coarse gravel (red and gray subangular sandstone); 7 percent cobbles (red and gray subangular sandstone); 5 percent stones (red and gray subangular sandstone); strongly acid (pH 5.3); clear smooth boundary.
- Bx2—29 to 60 inches; dusky red (2.5YR 4/3) very cobbly fine sandy loam; common medium faint weak red (2.5YR 5/2) iron depletions with clear boundaries on vertical faces of prisms; strong medium platy structure; very firm; brittle; few faint patchy dusky red (2.5YR 4/4) clay films on surfaces along pores; 20 percent coarse gravel (red and gray subangular sandstone); 15 percent cobbles (red and gray subangular sandstone); 10 percent stones (red and gray subrounded sandstone); strongly acid (pH 5.3).

Range in Characteristics

Thickness of solum: 40 to more than 75 inches

Soil Survey of Delaware Water Gap National Recreation Area

Depth to fragipan: 17 to 36 inches

Depth to bedrock: Greater than 60 inches

Rock fragments: 10 to 40 percent, by volume, in the A, E, Bhs, and Bw horizons; 15 to

65 percent in the Bx and C horizons

Reaction: Extremely acid to strongly acid, except where lime has been applied

O horizon (where present):

Color-black

Texture—slightly or moderately decomposed plant material

A horizon:

Color—hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3 Texture (fine-earth fraction)—fine sandy loam

F horizon.

Color—hue of 5YR to 10YR, value of 3 to 6, and chroma of 2 or 3 Texture (fine-earth fraction)—fine sandy loam

Bhs horizon:

Color—hue of 2.5YR to 10YR, value of 3, and chroma of 2 or 3 Texture (fine-earth fraction)—fine sandy loam

Bw horizon:

Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 3 to 6 Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Bx horizon:

Color—hue of 10R to 5YR, value of 3 to 5, and chroma of 2 to 4

Texture (fine-earth fraction)—sandy loam, loam, fine sandy loam, or silt loam

Redoximorphic features—iron depletions in shades of gray and iron accumulations in shades of red

Oquaga Series

Depth class: Moderately deep

Drainage class: Somewhat excessively drained

Permeability: Moderate

Parent material: Loamy till derived from red sandstone and siltstone and/or red shale

Landscape: Mountains
Landform: Ground moraines

Associated components: Arnot, Lackawanna, and Wellsboro soils and rock outcrop

Slope: 0 to 60 percent

Taxonomic classification: Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts

Typical Pedon

Oquaga channery loam in an area of Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky; Walpack Township, Sussex County, Delaware Water Gap National Recreation Area; 3,062 feet north of the parking lot for Blue Mountain Lakes, 50 feet southeast of the main trail above Blue Mountain Lakes, in a wooded area; USGS Flatbrookville topographic quadrangle; lat. 41 degrees 6 minutes 15.21 seconds N. and long. 74 degrees 55 minutes 40.58 seconds W.; NAD83.

Oi—0 to 1 inch; black (10YR 2/1) slightly decomposed organic material.

A—1 to 4 inches; very dark brown (7.5YR 2.5/2) channery loam; weak fine granular structure; very friable; many fine and common medium roots; 17 percent channers (red and gray sandstone); very strongly acid (pH 4.6); abrupt wavy boundary.

- Bw—4 to 20 inches; brown (7.5YR 4/4) very channery loam; weak medium subangular blocky structure; friable; common fine and medium roots; 40 percent channers (red and gray sandstone); very strongly acid (pH 4.8); clear wavy boundary.
- C—20 to 25 inches; brown (7.5YR 4/4) extremely channery loam; massive; friable; few fine and common coarse roots; 70 percent channers (red and gray sandstone); very strongly acid (pH 4.8); abrupt wavy boundary.
- 2R—25 inches; fractured red sandstone bedrock.

Range in Characteristics

Depth to bedrock: 20 to 40 inches

Rock fragments: 15 to 60 percent, by volume, in the A horizon; 25 to 85 percent, by

volume, in the Bw and C horizons

Reaction: Extremely acid to strongly acid, except where lime has been applied

O horizon (where present):

Color—black or brown

Texture—slightly or moderately decomposed plant material

A horizon:

Color—hue of 2.5YR to 10YR, value of 2 to 5, and chroma of 1 to 3 Texture (fine-earth fraction)—loam

Bw horizon:

Color—hue of 2.5YR to 7.5YR, value of 3 to 6, and chroma of 3 to 8 Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

C horizon:

Color—hue of 10R to 7.5YR, value of 3 to 5, and chroma of 2 to 4 Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or silt loam

2R layer:

Type of bedrock—hard, red sandstone and shale bedrock

Scio Series

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Moderate

Parent material: Postglacial coarse-silty alluvium

Landscape: River valleys Landform: Inner terraces

Associated soils: Aeric Endoaquepts and Unadilla soils

Slope: 0 to 3 percent

Taxonomic classification: Coarse-silty, mixed, active, mesic Aquic Dystrudepts

Typical Pedon

Scio silt loam, 0 to 3 percent slopes; Montague Township, Sussex County, Delaware Water Gap National Recreation Area; 3,960 feet northeast of the bridge on U.S. Route 206, about 2,000 feet west of County Route 521, and 2,600 feet south of terrace entrance road, in an abandoned crop field; USGS Milford, Pennsylvania-New Jersey topographic quadrangle; lat. 41 degrees 18 minutes 47.2 seconds N. and long. 74 degrees 47 minutes 20.2 seconds W.; NAD83.

Ap1—0 to 6 inches; dark brown (7.5YR 3/3) silt loam; weak fine subangular blocky structure parting to moderate fine granular; friable; many fine and medium roots; moderately acid (pH 5.6); clear wavy boundary.

- Ap2—6 to 13 inches; dark brown (7.5YR 3/3) silt loam; common medium faint brown (7.5YR 4/3) worm channels; weak medium subangular blocky structure parting to moderate fine granular; friable; many fine and medium roots; moderately acid (pH 5.6); clear wavy boundary.
- Bw1—13 to 23 inches; brown (7.5YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common fine and medium roots; few fine distinct brown (7.5YR 4/3) clay films on surfaces along pores; many medium distinct strong brown (7.5YR 4/6) and common medium distinct dark brown (7.5YR 3/4) iron accumulations with clear boundaries in the matrix; moderately acid (pH 5.6); gradual wavy boundary.
- Bw2—23 to 28 inches; brown (7.5YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common fine and medium roots; few fine distinct brown (7.5YR 4/3) clay films on surfaces along pores; many medium faint brown (7.5YR 4/2) iron depletions with clear boundaries in the matrix; many medium distinct strong brown (7.5YR 4/6) iron accumulations with clear boundaries in the matrix; moderately acid (pH 5.6); gradual wavy boundary.
- BC—28 to 50 inches; brown (7.5YR 4/2) silt loam; moderate medium subangular blocky structure; friable; common fine and medium roots; many medium distinct strong brown (7.5YR 4/6) iron accumulations with clear boundaries in the matrix; moderately acid (pH 5.6); gradual wavy boundary.
- C1—50 to 59 inches; brown (7.5YR 4/2) silt loam; massive; friable; common medium distinct strong brown (7.5YR 4/6) iron accumulations with clear boundaries in the matrix; moderately acid (pH 5.8); gradual wavy boundary.
- C2—59 to 72 inches; brown (7.5YR 4/2) silt loam; massive; friable; many coarse prominent yellowish red (5YR 4/6) iron accumulations with clear boundaries in the matrix; common medium and fine prominent black (10YR 2/1) manganese accumulations with clear boundaries in the matrix; moderately acid (pH 5.8).

Range in Characteristics

Thickness of solum: 20 to 50 inches Depth to bedrock: Greater than 72 inches

Coarse fragments: 0 to 5 percent, by volume, in the A, Bw, and BC horizons; 0 to 35 percent, by volume, in the C horizon

Reaction: Extremely acid to strongly acid in the A, Bw, and BC horizons and strongly acid to slightly alkaline in the C horizon; except where lime has been applied

O horizon (where present):

Color-black or brown

Texture—slightly to highly decomposed plant material

Ap horizon:

Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 or 3 Texture (fine-earth fraction)—silt loam

Bw horizon:

Color—hue of 7.5YR to 5Y, value of 4 or 5, and chroma of 3 to 6
Texture (fine-earth fraction)—silt loam or very fine sandy loam
Redoximorphic features—iron depletions in shades of gray and iron concentrations in shades of brown

BC horizon:

Color—hue of 7.5YR to 5Y, value of 4 or 5, and chroma of 2 to 6
Texture (fine-earth fraction)—silt loam or very fine sandy loam
Redoximorphic features—iron depletions in shades of gray and iron concentrations in shades of brown

C horizon:

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 to 4

Texture (fine-earth fraction)—silt loam or very fine sandy loam

Redoximorphic features—iron depletions in shades of gray, iron concentrations in shades of brown or yellowish red, and manganese concentrations that are black

Udifluvents

Typical Pedon

Udifluvents, 0 to 3 percent slopes, occasionally flooded; Walpack Township, Sussex County, Delaware Water Gap National Recreation Area, Walpack Bend; 4,500 feet southwest of the intersection of County Route 615 and Old Mine Road, 1,400 feet south of Old Mine Road, in a wooded area on a terrace adjacent to the Delaware River; USGS Flatbrookville, New Jersey-Pennsylvania topographic quadrangle; lat. 41 degrees 5 minutes 38 seconds N. and long. 74 degrees 58 minutes 27 seconds W.; NAD27.

- A—0 to 3 inches; dark yellowish brown (10YR 3/3) loamy sand; single grain; loose; strongly acid (pH 5.3); clear smooth boundary.
- C1—3 to 16 inches; very dark gray (10YR 3/1) loamy sand; single grain; loose; strongly acid (pH 5.5); clear wavy boundary.
- C2—16 to 22 inches; dark brown (10YR 3/3) sandy loam; massive; friable; strongly acid (pH 5.5); clear wavy boundary.
- C3—22 to 27 inches; dark brown (10YR 3/3) sandy loam; massive; friable; common medium faint brown (10YR 4/3) iron depletions with clear boundaries in the matrix; strongly acid (pH 5.5); clear wavy boundary.
- C4—27 to 32 inches; dark brown (10YR 3/3) sandy loam; massive; friable; strongly acid (pH 5.5); clear wavy boundary.
- C5—32 to 50 inches; stratified 95 percent dark yellowish brown (10YR 3/4) loamy sand and 5 percent dark yellowish brown (10YR 3/4) fine sandy loam; massive; friable; common medium faint brown (10YR 4/3) iron depletions with clear boundaries in the matrix; strongly acid (pH 5.5).

Range in Characteristics

Thickness of solum: 6 to 30 inches

Depth to bedrock: Greater than 60 inches

Rock fragments: 0 to 35 percent, by volume

Reaction: Very strongly acid to moderately acid

O horizon (where present):

Color—black or dark brown

Texture—slightly to highly decomposed organic material

A horizon:

Color—hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 to 6 Texture (fine-earth fraction)—loamy sand

C horizon:

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 to 6
Texture (fine-earth fraction)—loamy sand or sandy loam; stratified in some pedons
Redoximorphic features—iron depletions in shades of gray and iron concentrations
in shades of brown

Unadilla Series

Depth class: Very deep Drainage class: Well drained

Soil Survey of Delaware Water Gap National Recreation Area

Permeability: Moderate in the surface layer and subsoil; moderately rapid or rapid in

the substratum

Parent material: Postglacial coarse-silty alluvium

Landscape: River valleys Landform: Inner terraces

Associated soils: Colonie and Delaware soils

Slope: 0 to 8 percent

Taxonomic classification: Coarse-silty, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Unadilla silt loam, 0 to 3 percent slopes; Walpack Township, Sussex County, Delaware Water Gap National Recreational Area, Walpack Landing Field; 250 feet northeast of gravel entrance road, 200 feet west of Old Mine Road, in a crop field; USGS Lake Maskenozha topographic quadrangle; lat. 41 degrees 7 minutes 30.5 seconds N. and long. 74 degrees 56 minutes 38.5 seconds W.; NAD83.

- Ap1—0 to 8 inches; dark brown (10YR 3/3) silt loam; moderate fine and medium granular structure; friable; common very fine and fine roots; neutral (pH 7.0); clear smooth boundary.
- Ap2—8 to 14 inches; dark brown (10YR 4/3) silt loam; moderate medium granular structure; friable; common very fine and fine roots; neutral (pH 6.6); abrupt smooth boundary.
- Bw—14 to 25 inches; dark yellowish brown (10YR 3/4) silt loam; weak medium subangular blocky structure; friable; common very fine roots; neutral (pH 6.6); gradual wavy boundary.
- BC—25 to 39 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium and coarse subangular blocky structure; friable; neutral (pH 6.6); gradual wavy boundary.
- C—39 to 60 inches; dark yellowish brown (10YR 4/4) very fine sandy loam; massive; friable; slightly acid (pH 6.5).

Range in Characteristics

Thickness of solum: 20 to more than 50 inches Depth to bedrock: Greater than 60 inches

Rock fragments: 0 to 5 percent, by volume, in the A, Bw, and BC horizons; 0 to 15

percent, by volume, in the C horizon

Reaction: Very strongly acid to neutral, except where lime has been applied

O horizon (where present):

Color—black or brown

Texture—slightly or moderately decomposed plant material

Ap horizon:

Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4 Texture (fine-earth fraction)—silt loam

Bw horizon:

Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 4 to 8 Texture (fine-earth fraction)—silt loam to very fine sandy loam

BC horizon:

Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 4 to 6 Texture (fine-earth fraction)—silt loam to very fine sandy loam

C horizon:

Color—hue of 7.5YR to 5Y, value of 4 or 5, and chroma of 2 to 6

Texture (fine-earth fraction)—loamy very fine sand, very fine sandy loam, or silt loam to a depth of 40 inches; very fine sandy loam or fine sandy loam below a depth of 40 inches

Wallpack Series

Depth class: Very deep Drainage class: Well drained

Permeability: Moderate or moderately rapid above the fragipan; moderately slow to

very slow in the fragipan

Parent material: Coarse-loamy till derived from limestone, sandstone, and shale

Landscape: Till plains Landform: Ridges

Associated components: Cambridge, Chadakoin, and Lordstown soils and rock

outcrop

Slope: 0 to 35 percent

Taxonomic classification: Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs

Typical Pedon

Wallpack silt loam, 8 to 15 percent slopes; Walpack Township, Sussex County, Delaware Water Gap National Recreation Area; 2,300 feet northwest of Walpack Center, 200 feet southwest of intersection of old township roads, and 100 feet east of an old north-south township road, in an abandoned crop field; USGS Lake Maskenozha topographic quadrangle; lat. 41 degrees 9 minutes 39.5 seconds N. and long. 74 degrees 53 minutes 15.3 seconds W.; NAD83.

- Ap1—0 to 3 inches; brown (10YR 4/3) silt loam; moderate fine and medium granular structure; friable; common fine and medium roots; 5 percent medium gravel (subangular shale and limestone); 5 percent medium gravel (subrounded shale and limestone); strongly acid (pH 5.3); abrupt smooth boundary.
- Ap2—3 to 9 inches; dark yellowish brown (10YR 4/4) gravelly silt loam; moderate fine granular and subangular blocky structure; friable; common fine and medium roots; 10 percent coarse gravel (subangular shale and limestone); 5 percent medium gravel (subrounded shale and limestone); strongly acid (pH 5.3); abrupt smooth boundary.
- Bt—9 to 16 inches; yellowish brown (10YR 5/6) gravelly silt loam; moderate medium subangular blocky structure; friable; few fine roots; common distinct discontinuous brown (7.5YR 4/4) clay films on rock fragments; 10 percent medium gravel (subangular shale and limestone); 10 percent medium gravel (subrounded shale and limestone); moderately acid (pH 5.8); clear wavy boundary.
- Btx1—16 to 25 inches; dark yellowish brown (10YR 4/4) gravelly silt loam; moderate coarse prismatic structure parting to moderate medium subangular blocky and weak medium platy; very firm; brittle; common distinct patchy brown (7.5YR 4/4) clay films on rock fragments; many coarse prominent light brownish gray (2.5Y 6/2) iron depletions with clear boundaries between prisms; many coarse distinct yellowish brown (10YR 5/8) iron accumulations with clear boundaries on vertical faces of prisms; 20 percent fine gravel (subrounded shale and limestone); 5 percent medium gravel (subangular shale and limestone); slightly acid (pH 6.4); clear wavy boundary.
- Btx2—25 to 65 inches; dark yellowish brown (10YR 4/4) very gravelly silt loam; strong very coarse prismatic structure parting to moderate medium subangular blocky and weak medium platy; very firm; brittle; common distinct patchy brown (7.5YR 4/4) clay films on rock fragments; common medium distinct light olive brown (2.5Y

5/4) iron accumulations with clear boundaries between prisms; common medium distinct strong brown (7.5YR 5/6) iron accumulations with clear boundaries on vertical faces of prisms; 20 percent coarse gravel (subangular shale and limestone); 20 percent fine gravel (subrounded shale and limestone); neutral (pH 7.0).

Range in Characteristics

Thickness of solum: 24 to more than 60 inches

Depth to fragipan: 12 to 36 inches

Depth to bedrock: Greater than 65 inches

Rock fragments: 5 to 25 percent, by volume, in the A or Ap, AB or BA, and Bt horizons

and 15 to 45 percent, by volume, in the Btx and C horizons

Reaction: Strongly acid to slightly acid in the A or Ap, AB or BA, and Bt horizons and moderately acid to slightly alkaline in the Btx and C horizons; except where lime has been applied

Other: Some pedons have an A horizon that is thinner than that of the typical pedon and has colors and textures similar to those of the Ap horizon.

O horizon (where present):

Color—black

Texture—slightly or moderately decomposed plant material

Ap or A horizon:

Color—hue of 10YR, value from 3 to 5, and chroma of 1 to 4 Texture (fine-earth fraction)—silt loam

AB or BA horizon (where present):

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6 Texture (fine-earth fraction)—sandy loam to silt loam

Bt horizon:

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 8 Texture (fine-earth fraction)—sandy loam to silt loam

Btx horizon:

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 6

Texture (fine-earth fraction)—sandy loam to silt loam

Redoximorphic features—iron depletions in shades of gray and iron accumulations in shades of brown

C horizon (where present):

Color—hue of 5Y to 7.5YR, value of 4 or 5, and chroma of 4 to 6

Texture (fine-earth fraction)—sandy loam to silt loam

Wellsboro Series

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Moderate above the fragipan; slow in the fragipan

Parent material: Coarse-loamy till derived from red shale and/or red sandstone and

siltstone

Landscape: Mountains Landform: Ground moraines

Associated soils: Lackawanna and Morris soils

Slope: 0 to 15 percent

Taxonomic classification: Coarse-loamy, mixed, active, mesic Typic Fragiudepts

Typical Pedon

Wellsboro silt loam, 0 to 8 percent slopes, extremely stony; Pahaquarry Township, Warren County, Delaware Water Gap National Recreation Area, Millbrook Village; 528 feet west of the intersection of Old Mine Road and County Route 602, about 200 feet north of Old Mine Road, in a wooded area at the toeslope of Kittatinny Mountain; USGS Flatbrookville topographic quadrangle; lat. 41 degrees 4 minutes 24 seconds N. and long. 74 degrees 57 minutes 40 seconds W.; NAD83.

- Ap—0 to 8 inches; brown (10YR 4/3) silt loam; weak medium subangular blocky structure parting to moderate medium and fine granular; friable; common fine and medium and few coarse roots; 8 percent cobbles (red and gray subangular sandstone); 3 percent coarse gravel (red and gray subangular sandstone); strongly acid (pH 5.3); clear wavy boundary.
- Bw1—8 to 15 inches; light reddish brown (5YR 6/3) cobbly silt loam; moderate medium subangular blocky structure; friable; common fine roots; common fine distinct reddish brown (5YR 5/4) iron accumulations with clear boundaries in the matrix; many medium prominent black (10YR 2/1) manganese accumulations in the matrix; 14 percent cobbles (red and gray subangular sandstone); 10 percent coarse gravel (red and gray subangular sandstone); strongly acid (pH 5.2); gradual wavy boundary.
- Bw2—15 to 24 inches; light reddish brown (5YR 6/3) cobbly loam; moderate medium subangular blocky structure; friable; few fine roots; many medium prominent strong brown (7.5YR 5/6) iron accumulations with clear boundaries in the matrix; 14 percent cobbles (red and gray subangular sandstone); 10 percent coarse gravel (red and gray subangular sandstone); strongly acid (pH 5.2); gradual wavy boundary.
- Bw3—24 to 29 inches; light brown (7.5YR 6/3) cobbly loam; moderate medium subangular blocky structure; friable; few fine roots; common medium faint pinkish gray (7.5YR 6/2) iron depletions with clear boundaries in the matrix; many medium distinct strong brown (7.5YR 5/6) and common medium distinct yellowish red (5YR 4/6) iron accumulations with clear boundaries in the matrix; 15 percent cobbles (red and gray subangular sandstone); 14 percent coarse gravel (red and gray subangular sandstone); strongly acid (pH 5.2); clear wavy boundary.
- Bx1—29 to 37 inches; reddish brown (5YR 4/3) cobbly sandy loam; moderate very thick platy structure; firm; common vesicular pores; common distinct patchy reddish brown (5YR 4/3) clay films on rock fragments; 18 percent cobbles (red and gray subangular sandstone); 16 percent coarse gravel (red and gray subangular sandstone); strongly acid (pH 5.1); gradual wavy boundary.
- Bx2—37 to 60 inches; 70 percent reddish brown (5YR 4/3) and 30 percent weak red (2.5YR 5/3) cobbly sandy loam; moderate very thick platy structure; firm; common vesicular pores; common distinct patchy reddish brown (5YR 4/3) clay films on rock fragments; common medium faint reddish brown (5YR 4/4) iron accumulations with clear boundaries in the matrix; common medium prominent black (10YR 2/1) manganese accumulations with sharp boundaries in the matrix; 18 percent cobbles (red and gray subangular sandstone); 16 percent coarse gravel (red and gray subangular sandstone); strongly acid (pH 5.1).

Range in Characteristics

Thickness of solum: 40 inches or more Depth to fragipan: 17 to 36 inches Depth to bedrock: Greater than 60 inches

Rock fragments: 10 to 40 percent, by volume, in the A, E, and Bw horizons; 15 to 45

percent, by volume, in the Bx horizon

Reaction: Extremely acid to strongly acid, except where lime has been applied

Soil Survey of Delaware Water Gap National Recreation Area

Other: Some pedons have an A horizon that is thinner than that of the typical pedon but has colors and textures similar to those of the Ap horizon.

O horizon (where present):

Color—black or brown

Texture—slightly or moderately decomposed plant material

Ap horizon

Color—hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3 Texture (fine-earth fraction)—silt loam

E horizon (where present):

Color—hue of 5YR to 10YR, value of 3 to 6, and chroma of 2 or 3 Texture (fine-earth fraction)—fine sandy loam, loam, or silt loam

Bw horizon:

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 6 Texture (fine-earth fraction)—loam or silt loam

Bx horizon:

Color—hue of 10R to 5YR, value of 3 to 5, and chroma of 2 to 4
Texture (fine-earth fraction)—sandy loam, loam, or silt loam
Redoximorphic features—iron depletions in shades of gray and iron accumulations in shades of red

Formation of the Soils

By Susan Burlew Southard. Natural Resources Conservation Service.

This section describes the factors of soil formation and the processes of horizon formation and relates them to the soils in Delaware Water Gap National Recreation Area, New Jersey and Pennsylvania.

Setting

The setting and geologic materials of the park are related to the parent materials and therefore to the types of soils in the park. The geographic setting, geologic materials, and earth-shaping processes of Delaware Water Gap National Recreation Area have contributed to the many types of soils found in the park. Understanding the soils of the park enhances understanding of the unique relationship between soils and the environment. Soil forming processes are influenced by rock type, topographic expression, surface properties, and hydrologic properties. Because soil formation influences soil properties and behaviors, an understanding of the processes of soil formation may help in the determination of best management practices.

The park encompasses 70,000 acres of land in New Jersey and Pennsylvania along the Delaware River, extending for 35 miles upstream from the Delaware Water Gap (fig. 4).

The crest of Kittatinny Mountain is observable at the gap and is the approximate eastern boundary of the park in New Jersey (fig. 5). The crest forms a long ridge that maintains a nearly level elevation between 1,400 and 1,600 feet for much of its extent from the southeastern boundary of the park northward to the New Jersey-New York border. Kittatinny Mountain has a core consisting of the highly erosion-resistant material from the Silurian Shawangunk Formation (USDA–NRCS, 2009). The high quartz content of the conglomerates and sandstones of the Shawangunk Formation ensures that the rock is resistant to both mechanical and chemical weathering and to erosion (Witte, 1997). Due to preferential erosion, Kittatinny Mountain has remained relatively unchanged as the surrounding landscape has continued to erode (fig. 6).

The Great Valley Region of New Jersey is east of Kittatinny Mountain. The carbonate rocks and shale of Cambrian and Ordovician age in the Great Valley Region are more easily weathered than the Shawangunk conglomerates. The Port Jervis Trough lies to the west along the Pennsylvania-New Jersey border. The Early and Middle Devonian rocks of the trough are also more easily eroded than the Shawangunk Formation. At Port Jervis, the Delaware River is deflected by Walpack Ridge and turns south along the trough. Walpack Ridge is comprised of hard limestone that was not broken off and worn down by glaciation. Past the point of deflection, the river follows the trough into the survey area. The trough forms the locally-named Minisink Valley. The trough (and valley) formed along the contact of steeply westward-dipping Devonian strata and the geologic formations of the Kittatinny Mountain to the east. The Minisink Valley area of the park has been buried by glaciofluvial deposits (Witte, 2012). Glaciofluvial deposits are stratified materials moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The Delaware River bends again at the end of the Walpack Ridge near Flatbrookville, in

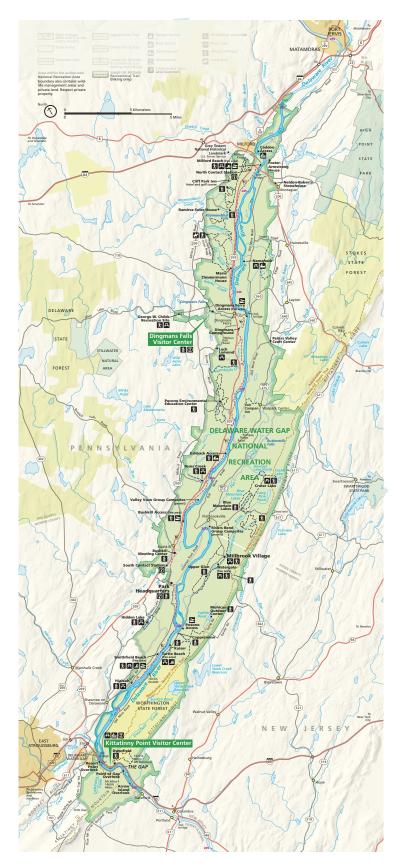


Figure 4.—Map of Delaware Water Gap National Recreation Area.



Figure 5.—The Delaware Water Gap in the distance as viewed from the New Jersey side of the river.



Figure 6.—The Kittatinny Mountain summit looking south across Culvers Gap. The map unit in this area is Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky. Note glacier-polished rock outcrop. The Arnot soil is shallow and associated with rock outcrop. The mountain provides some of the most spectacular views in the park (USDA–NRCS, 2009).

the approximate geographic center of Delaware Water Gap National Recreation Area. The entire park has been affected by glaciation.

Factors of Soil Formation

Soil covers the surface of the earth as a three-dimensional body of varying thickness and is made up of different proportions of organic and mineral material and pore space filled with gases and water. Soils differ in their appearance, productivity, and management requirements due to their chemical and physical properties. The characteristics and properties of soils are determined by physical and chemical processes that result from the interaction of five soil-forming factors. These factors of soil formation are interdependent, and few generalizations can be made regarding any one factor unless the effects of the other factors are known. The term "pedogenesis" is often used to refer to the processes of soil formation.

The interacting soil-forming factors are parent material, climate, organisms, time, and topography and relief (Jenny, 1941). Parent material is the source material (mineral or organic) in which soils formed. Soils are influenced by the texture and structure of the parent material and its mineralogical and chemical composition. The predominant aspects of climate that affect soil formation are temperature and kind and amount of precipitation. The seasonal distribution of temperature and precipitation also has an influence. Organisms include humans and the plants, animals, and microorganisms living in and on the soil. Time refers to how long the soil-forming factors have been operating on a particular landscape. Relief and topography refer to the elevation and shape of the landscape. They affect internal and external soil properties, such as drainage, aeration, susceptibility to erosion, and exposure to sun and wind.

The processes of soil formation are sequences of events, involving biogeochemical reactions that are energized by climate and spatially related to relief and topography (Buol and others, 2011). The physical and chemical properties of a soil are altered by these reactions over time.

The influence of each of the soil-forming factors varies. Soils may differ significantly from place to place in a park and within very short distances as a result of complex interaction among the five factors. In some instances, however, parks may have vast stretches of the same type of soil because of uniform soil-forming factors.

Parent Material

The unconsolidated mass in which soils form is called "parent material." Mineral soils are a product of the weathering of underlying bedrock in place or the weathering of material that has been transported. Organic soils form in place from the accumulation and decomposition of plant material, such as wood, leaves, and aquatic plants. Weathering refers to the chemical and physical disintegration and decomposition of the parent material. Few soils weather entirely from the underlying rocks. More commonly, soils form in materials that have been transported from elsewhere. Soils generally have a dominant kind of parent material but are influenced by other types of parent material. Material that has been moved by gravity is called colluvial material. Material that has been moved by running water is called alluvial material. Lacustrine deposits are a type of parent material deposited by lakes and ponds. Soils are said to have residual parent material if they formed directly from underlying rocks or from an in situ plant source. Soils that formed in residuum may have the same general chemistry as the original rocks, depending on the degree of weathering that has occurred. Material that has been moved primarily by wind is called eolian material. Windblown sand is an example. Windblown loess, which has been blown for long distances, consists mainly of very fine sand and silt-size particles. Till and outwash are parent materials that were moved by glaciers and glacial waters.

Till

Till is soil parent material transported and deposited by glaciers. It consists dominantly of unsorted and unstratified material deposited directly by a glacier without subsequent reworking by meltwater. It is a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders. Till has rock fragments of various lithologies imbedded within a finer matrix (USDA–NRCS, 2008). The rock fragments generally are angular, but can also be subrounded or rounded. The composition of the till depends on the geology of the area over which the ice passed before the till was deposited. The till in turn affects soil properties, including kind and amount of rock fragments, color, texture, mineralogy, and pH. Figure 7 depicts a landscape near Millbrook Village, which is in the southern part of the park where red tills are found. Till deposits from the most recent Pleistocene glacier extend about 10 miles south of the Delaware Water Gap. Other glaciers of Early Pleistocene age also advanced into the park region.



Figure 7.—A rounded landscape in an area of Lackawanna and Wellsboro soils. Both soils are nearly level to steep. Slopes range from 0 to 55 percent. The soils formed on glaciated uplands in red till derived from sandstone, siltstone, and shale. Both soils have a fragipan.

Many types of till have served as parent materials for the soils in the park. The different till parent materials and landforms are listed in table 5 "Landscape, Landform, and Parent Material."

Basal till is unconsolidated material of mixed composition deposited at the base (bottom) of a glacier. The Volusia soils in the park formed in basal till and tend to be finer than most of the other soils that formed in till. Ablation till is a general term for loose, relatively permeable, earthy material deposited during the downwasting of nearly static glacial ice, and is either contained within or accumulated on the surface of the glacier. Soils that formed from ablation till include Lackawanna, Morris, and Oquaga.

Different tills are on different landforms. The common tills in the park were deposited as till plains composed of either ground moraines or recessional moraines. A till plain is a broad landscape that forms when a sheet of ice melts in place and deposits the sediments it carried. It is an extensive, flat to gently undulating area underlain predominantly by till and bounded on the distal end by a recessional or end moraine. A ground moraine landform is commonly an extensive, low-relief area of till having an uneven or undulating surface and is commonly bounded on the distal end by a recessional or end moraine (USDA–NRCS, 2008). Soils that formed on ground moraines include Arnot, Lordstown, Swartswood, and Wurtsboro.

Till can be transported great distances by a glacier, or it can be of local origin. For example, the Wallpack soils are found only on the Walpack Ridge (fig. 8). These soils formed in till derived from the shale and limestone bedrock of the ridge's mixed rock types (USDA–NRCS, 2009).



Figure 8.—Hoosic and Hazen soil landscape in the foreground. These soils formed in glaciofluvial deposits on a landscape known as a "valley train." Walpack Ridge is to the right in the background. The ridge is covered by Wallpack soils, which are mantled with till. The ridge is erosion-resistant and exhibits higher elevation and steeper slopes than the glaciofluvial deposits. The ridge deflected the flow of the Delaware River to the southwest from a previous southeast direction.

Till-derived soils in the park include Arnot, Bath, Farmington, Galway, Lackawanna, Lordstown, Manlius, Morris, Nassau, Oquaga, Volusia, and Wellsboro. Arnot and Lordstown soils are predominately on Kittatinny Mountain. They formed in till derived from the red sandstone of the Upper Silurian Bloomsburg Red Beds and conglomerate of the Middle and Lower Silurian Shawangunk Formation (USDA–NRCS, 2009). Hillslopes composed of till typically have a distinctive margin with terrace soils as seen near the Town Creek picnic area in figure 9. Oquaga and Lackawanna soils are till-derived and are located together on ground moraines in the southeastern part of the park as illustrated in figure 10. Manlius and Nassau soils are mainly in the northern and western parts of the Kittatinny Valley. They formed in till derived from shale bedrock that underlies parts of the valley. Conversely, the Farmington, and Galway soils are in the eastern and south-central parts of the Kittatinny Valley. They formed in

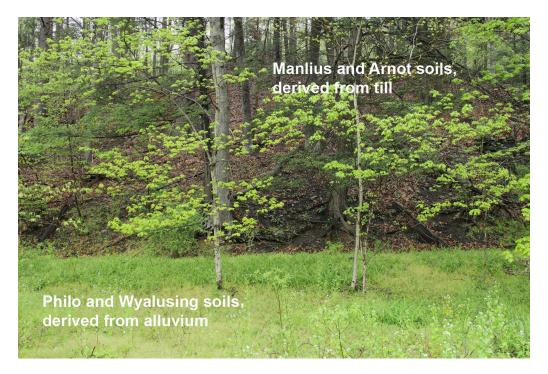


Figure 9.—Manlius and Arnot soils on a hillslope and Philo and Wyalusing soils on a terrace near the Town Creek picnic area.



Figure 10.—Oquaga and Lackawanna soils on ground moraines near the Karamac parking area. Oquaga soils have a high content of rock fragments. Lackawanna soils have a lower content of rock fragments.

till derived from the limestone and dolomite bedrock that underlies the valley. Dekalb and Weikert soils also formed in a combination of till and residuum, and Buchanan, Clymer, and Laidig soils formed in a combination of mostly till and colluvium (USDA–SCS, 1981).

Alluvium

Alluvium is material deposited by running water. Alluvium can have different textures, depending on the speed of the water. Slow-moving water deposits fine textured material (clay and silt) as the sediments in the water settle out. Fast-moving water deposits gravel, cobbles, and sand. The type of rocks in the source region for the streams and rivers determines some characteristics of the alluvium.

Postglacial alluvial deposits were laid down during the Pleistocene and Holocene Epochs of the Quaternary period as the glaciers retreated. The glacial and postglacial environments affected the morphology of the Delaware River Valley. Increased precipitation enhanced downcutting and erosion. Eroded materials were deposited by the river elsewhere. These alluvial deposits further weathered in place on river terraces to form some of the soils currently in the park.

At the beginning of glacial recession, the Delaware River was a braided stream fed by meltwater from the receding glaciers. The river became more linear after the glaciers fully retreated from the Upper Delaware Valley. During the river's development, alluvium was deposited as stream terraces on successive flood plains. Each flood plain was abandoned by the continual incising of the river into lower deposits and the lowering of the water level of the river (Witte, 1997). Colonie, Delaware, Phelps, Scio, and Unadilla soils formed from these postglacial alluvial deposits on terraces. Because of favorable characteristics, these soils have historically been used for agriculture as they are on elevated terraces that are not subject to frequent flooding. Most of the map units on high river terraces are prime farmland. Table 3 lists the map units that have favorable farmland classifications. Park-administered agricultural leases in the park are usually on the higher elevation river terraces (fig. 11).

Fluvaquents, Fluvents, Udifluvents, Barbour, Holly, Philo, Pope, Suncook, Wayland, and Wyalusing soils all formed in postglacial alluvium in the lower positions on flood plains and all have variable risks for flooding. The Pope soil is also found extensively on the major islands in the river. Table 19 lists the frequency and duration of flooding and ponding for the dominant soils in each map unit.

Craigsville and Wyoming soils are typically associated in nearly level or gently sloping positions along the major tributaries to the Delaware River. Craigsville soils formed in alluvium that washed from sandy and gravelly upland soils. Wyoming soils formed in a combination of alluvium and colluvium and are nearly level to very steep. Wyoming soils are on outwash terraces, moraines, kames, eskers, and valley trains. They formed in gravelly, water-sorted material derived from red and gray sandstone, siltstone, and shale. In the park, these soils are along Spackman's Creek, Tom's Creek, Hornbeck's Creek, Dingman's Creek, and Adam's Creek.

Figure 12 depicts some of the typical landscapes, parent materials, and soils in the park.

Outwash

Outwash (glaciofluvial) deposits are stratified and sorted sediments (chiefly sand and gravel) removed or "washed out" from a glacier by meltwater streams and deposited in front of or beyond the end moraine or margin of a glacier. The coarser material is deposited nearer to the ice and consists of rock or soil parent material transported and deposited by meltwater running off a receding glacier.

Certain landforms are associated with outwash, and certain soils are associated with these landforms. An outwash plain is an extensive lowland landscape consisting



Figure 11.—An area of Unadilla silt loam, 0 to 3 percent slopes, in the Delaware Valley. Areas of this soil are leased for corn production in some parts of the park. Unadilla soils formed in alluvium deposited by the Delaware River. The map unit is prime farmland. (USDA–NRCS, 2009).



Figure 12.—An area north of Shawnee, Pennsylvania, depicting the relationships between soil, landscape, and parent material in the park.

of coarse textured, glaciofluvial material. An outwash plain commonly is smooth, generally has low relief, and largely retains its original gradient. A valley train is a long narrow body of outwash that was confined within a valley beyond a glacier. Soils on valley trains include Hazen, Hoosic, and Otisville (fig. 8).

Similarly to till, outwash can have a variety of particle sizes. However, like alluvial materials, the particle-size distribution of outwash depends upon the velocity of the meltwater carrying the sediment. In general, the higher the velocity of water, the larger the particle that the water can transport. Rock fragments in outwash are more commonly subrounded or rounded because they were tumbled and polished during transport. Soils that formed from outwash and till in this region of the country commonly have a high content of rocks.

The outwash deposits in the park were influenced by the source of the geologic materials being carried by water. Consequently, the geologic origin of the rock fragments in these outwash deposits can be more variable than the geologic origin of the rock fragments in till deposits. For example, although the Kittatinny Valley is underlain mainly by shale and limestone bedrock, the Fredon, Halsey, Hazen, Hoosic, and Otisville soils in the valley contain rock fragments consisting not just of limestone and shale but also of sandstone and conglomerate (USDA–NRCS, 2009). Other soils that formed in outwash in the park are Chenango and Braceville. Some soils in the park formed from a mix of outwash and alluvium. An example is the Sheffield taxadjunct.

Eolian Material

Some soils in the park have eolian parent materials due to the past glacial and periglacial environments. Periglacial refers to conditions, processes, and landforms expected or found in areas adjacent to glaciers. These glacial and periglacial environments were subject to strong directional winds, mostly blowing to the southeast. The Colonie soil is on terraces along the eastern side of the Delaware River. The soil formed in a mix of postglacial sandy alluvium and some fine-sandy material blown up from the active and ancestral river channels. Some areas of these soils have a hummocky and obvious sandy appearance. Figure 13 shows corn stubble buried under eolian sand deposits. Some of the Wallpack soils have a mantle of loess (high silt content) that was blown in and captured as a surface mantle on the soils. These mantled soils are on the west-facing slopes of Walpack Ridge where prevailing winds captured the silts.

Organic Residuum

Organic deposits in the park consist of accumulations of decomposed plant material in postglacial lakes and ponds and in depressions called "kettles." Kettles are depressions that formed by the melt-out of incorporated ice blocks on outwash plains and till plains. Over time, these water-filled depressions filled with organic material derived from algae, sedges, rushes, and other water-tolerant plants. The plant residue accumulated because permanently wet conditions of the soils prevented oxidation and slowed decomposition.

The influence of organic residuum as a parent material is commonly a major factor in the development of highly carbon-sequestrating ecological niches in the park. Soils that formed in these swamps have the same dark brown and black colors as the decomposed hydrophilic plant material from which they formed. A wet marsh landscape of mucky peat is near the park headquarters west of Depew Island. Catden, Freetown, and Paupack soils are also derived from residual organic deposits.

The content of organic carbon and inorganic carbon for each soil in the park is shown in table 17. The Conotton soils are the only soils in the park that have a measurable content of soil inorganic carbon (SIC). This SIC is probably derived from limestone. Soil organic carbon (SOC) originates from a biological source, such as plants, animals, or microorganisms. It makes up about one-half the weight of the



Figure 13.—An area of Colonie loamy fine sand, 3 to 8 percent slopes, to the west of the Old Mine Road in New Jersey. Colonie soils are sandy. They formed in sandy alluvial material and windblown sand. The sand probably blew up from the ancestral Delaware River corridor during glacial and postglacial time.

organic matter in a soil. The term "soil organic carbon" refers only to the carbon in organic matter. Soil inorganic carbon is the carbon in soil carbonates, typically as calcium carbonate in layers or as clay-sized fractions throughout the soil. Carbonates in soils are most common in areas where evaporation rates exceed precipitation rates, as in most desert environments in the western United States. Generally, the carbonates in those dry areas accumulated from carbonatic dust or from carbonate-containing parent material.

The Freetown soil has the highest content of soil organic carbon of any soil in the park. Based on current data, a Freetown soil has 170 kilograms of soil organic carbon per square meter (to a depth of 2 meters). That equates to about 750 tons of stored carbon per acre of land where the map unit is 100 percent Freetown soil. The Freetown soil is very poorly drained. It is mapped on the divide between Adams Creek and Dry Brook directly south of Long Meadow Road where the road turns sharply to the west.

Processes by which carbon is withdrawn from the atmosphere and secluded in soil are called "carbon sequestration." Atmospheric carbon dioxide (${\rm CO_2}$) and methane (${\rm CH_4}$) are greenhouse gases. Soil carbon sequestration transfers carbon dioxide from the atmosphere to the soil.

Humification is one process by which soil organic carbon becomes sequestered. Humification occurs when organic matter, such as leaves, wood, roots, and animals, is decomposed and converted to humic substances. Humic substances are broadly defined as products of organic matter decomposition that are relatively resistant to further microbial decomposition. Humic substances containing a high content of carbon can persist in the soil for thousands of years. Examples of humic substances are humic and fulvic acids and humins. Humification is common in depressions in the park.

Burial is also a process of carbon sequestration. Soil organic carbon can be buried in various ways. Burial of carbon-containing soil layers limits the exposure of the

carbon to the atmosphere and microbial degradation, thereby preserving organic carbon in the soil. Floods along the Delaware River episodically bury, cover, and preserve old soil surface horizons with new sediment. Landslides along the hillslopes can also bury soil organic carbon.

Erosion is a natural process that can also sequester carbon in soils. Removal of soil from one place often results in burial of soil in another place. Burial of soil horizons that contain soil organic matter sequesters that carbon in the soil.

Climate

Past and present climate variations have significantly affected soil-forming processes in the park. Climatic factors, such as precipitation and temperature, have influenced the existing plant and animal communities and the physical and chemical weathering of the parent material. Temperature and moisture influence soil formation and are the two most commonly measured features of climate. Weathering is most active when soils are moist and warm because these soil conditions are conducive to rapid chemical reactions and increased biological activity in the soil. Cooler temperatures result in slower chemical reactions. Although average temperatures and precipitation are important in determining soil properties, the extremes of climate also have a major role in soil formation at any specific locale.

Glaciers advanced over the park during the last ice age and obliterated the existing vegetation and soils. The cold temperatures most likely prohibited or significantly reduced the rate of chemical reactions in the rock and soil material. As the temperature slowly increased and glaciers started to recede, the deposition of till and glaciofluvial material began. After the ice retreated and the climate gradually warmed, deciduous forests eventually succeeded the preexisting vegetation. The warmer, humid climate increased the physical and chemical weathering of the parent material and the accumulation of organic matter. The formation and translocation of clay and the leaching of soluble compounds accelerated during this time.

During periods of rainfall or snowmelt, water carries dissolved or suspended solids through the soil in a process called "leaching." The leaching process becomes active with the onset of rainfall or snowmelt. Variations in temperature and moisture cause variations in weathering and leaching in the soil. Seasonal and daily changes in temperature affect moisture effectiveness, biological activity, rates of chemical reactions, and kinds of vegetation.

The areas adjacent to glaciers, or periglacial areas, had intensified hillslope weathering during the ice ages (Means, 1995). The past periglacial environments in the park included discontinuous permafrost, tundra-like vegetation, and many freeze-thaw cycles due to proximity to the glacial environment. Freeze-and-thaw cycles led to ice-wedging of boulders and small rocks. During the day, water would melt and seep into soil and cracks. At night, the water would freeze, expand, and force the rocks apart. Movement of the rocks and soil created talus piles lower on the slopes. Large, water-saturated masses of rock and soil would slowly slide downward in lobes over frozen or partially frozen ground in a process known as solifluction.

Present-Day Climate

Currently, the soils in the park are usually moist (they have a udic soil moisture regime) and have a mesic soil temperature regime. Some soils in low-lying positions have an aquic (usually wet) soil moisture regime. Examples are Alden and Holly soils. The Alden soil is in depressions on till plains and has reduced iron due to the saturated environment. The Holly soil is in depressions on flood plains in backswamp positions (fig. 14). Reduced iron appears as grey material in the soil (fig. 15). Both soils are hydric (table 4). Some soils are seasonally wet because water movement within the profile is restricted by contrasting particle-size classes. The Fredon soils are an example. Tables 19 and 20 list distinguishing features of the soils.



Figure 14.—An area of Holly soil in a backswamp along the Delaware River. Holly soils are hydric.



Figure 15.—A profile of a Holly soil. Holly soils are very deep and very poorly drained. They are on flood plains. The depth to the water table fluctuates with seasonal flooding in the river. Depths on the tape are in centimeters. (USDA–NRCS and USDI–NPS, 2013)

Climate and Frost Heave

Many of the soils in the park have moderate or high susceptibility to frost heave. Frost heave is a natural pedogenic process that breaks up and mixes the surface of the soil. Table 20 categorizes the potential for frost heave as low, moderate, or high "Potential for frost action." The Chippewa, Freetown, Holly, Norwich, Shohola, Volusia, and Wellsboro soils in the park are rated as having a high potential for frost action. Many soils in the park have a dense layer, called a "fragipan," that supplies the source of water for frost heave above the pan.

Frost heave results from ice forming beneath the surface of soil during atmospheric freezing conditions. The ice grows in the direction of heat loss, which is vertically toward the surface, starting at the freezing boundary in the soil. Frost heave requires a water supply to keep feeding the growth of ice crystals. The growing ice is restrained by overlying soil, which applies a load that limits vertical growth and promotes the formation of lens-shaped areas of ice within the soil. Figure 16 illustrates the formation of ice lenses (Williamborg, 2009). The process of frost heave was more intense during glacial times than it is today.

Frost heave can result in potholes, cracked pavements, and cracked foundations. Table 9 indicates which map units and soils are limited as a site for roads and streets

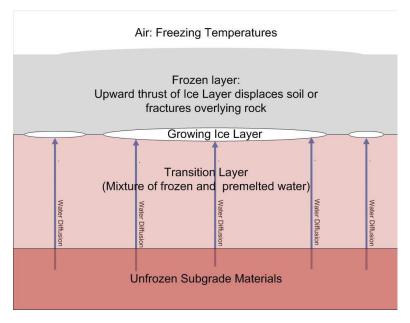


Figure 16.—Diagram illustrating formation of ice lenses that result in frost heave or frost action (Williamborg, 2009).

due to frost action. The limitation results in higher maintenance costs for roads and parking lots.

Present-day climate variations are the result of topography and relief. In most areas of the United States, temperature generally decreases with elevation and precipitation generally increases with elevation. As elevation increases, the amount of precipitation, the extent of leaching, and the amount of vegetation generally increase up to a point where decreasing temperatures reverse the trend. The colder temperatures result in less leaching because of decreased microbial growth, decreased vegetation, and possibly frozen soil. Fluctuations in temperature and moisture affect the rate at which organic matter is produced, decomposed, and accumulated and the rate at which minerals are weathered.

Some areas of the country have climates that make the areas susceptible to wildfires. Wildfires are less common in this park than in parks in the western United States but can occur during periods of drought. Wildfires can alter physical and chemical properties of the soil. Erosion can be accelerated by the loss of vegetation and ground cover. Slopes can be destabilized by increased runoff after fires.

Organisms

Plants, animals, microorganisms, and humans affect the formation and shape of soils. Plants capture solar energy via photosynthesis and transfer that energy to the soil, energy that is a fundamental driver of many soil processes. Fungi and bacteria are the primary organisms that decompose organic matter and add nutrients to the soil. Animals and microorganisms mix soils and form burrows and pores. Abandoned animal burrows commonly are filled with loose material from the overlying horizons and transmit water more readily than the surrounding undisturbed soil material. Microorganisms affect chemical exchanges between roots and soil. Bacteria, fungi, and many other microorganisms decompose organic matter and release nutrients to growing plants. They influence the formation of soil structure. Soil properties, such as drainage, temperature, and reaction, influence the type of microorganisms that live in the soil. Fungi are generally more active in the more acid soils, while bacteria are more active in the less acid soils.

Plant roots open channels in the soils. Different types of roots have different effects on soils. Grass roots are fibrous and decompose easily, adding organic matter to the soil. Fine grass roots can extend below the surface for many feet. Plant roots also help to develop soil structure and aggregate stability. Vegetation increases soil stability by protecting the surface against wind erosion and water erosion. Taproots open pathways through dense layers.

The vegetation under which a soil forms influences soil properties, such as color, structure, reaction, and content and distribution of organic matter. Vegetation extracts water from the soil, recycles nutrients, and adds organic matter to the soil. Gases derived from root respiration combine with water to form acids that influence the weathering of minerals. Soils that formed under forest vegetation generally have a lower content of organic matter than soils that formed under grasses. The forest soils are therefore generally lighter colored. The variety of soil types, the differences in exposure to the sun, and the variations in temperature and moisture create hundreds of microhabitats that support diverse communities of plants.

The large plants in the forested ecosystem in the park affect soil formation. Tree roots help break up rocks, resulting in channels that increase water penetration. The shallow Benson soil is associated with hard rock outcrop that is slowing being fractured by tree roots. Trees that are blown down help mix the soil when their roots are exposed. Trees capture energy and substance through photosynthesis, by the decomposition of plant residue, and by forming organic-mineral complexes that are recycled many times within the ecosystem (Buol and others, 2011).

The native vegetation depends on climate, topography, and biological factors plus soil factors, such as soil density, depth, chemistry, temperature, and moisture. The dominant coniferous tree in the park is eastern hemlock, which is the Pennsylvania State tree. Eastern hemlock is an important component of the forest canopy in stands covering approximately 2,800 acres (about 5 percent) of the park. The species thrives in damp, cool soils in shady microclimates and has shallow roots that are vulnerable to ground fires, erosion, drought, heavy snows, high winds, and human encroachment. Common deciduous trees in the park include white oak, red maple, and shagbark hickory. Forest communities of river birch are on wet soils along creeks, lakes, and the Delaware River. These trees help to minimize soil erosion along the banks of

waterways. A common shrub is mountain laurel, which is the Pennsylvania State flower and blooms in June. Mountain laurel thrives in the acidic soil of hemlock ravines.

Leaves from plants fall to the surface and decompose on the soil. Organisms decompose these leaves and mix them with the upper part of the soil, resulting in cycling of nutrients and energy back to vegetation. The leaf litter, both leaves and needles, helps prevent nutrient loss, conserves soil moisture, reduces raindrop impact, and limits frost penetration.

Human activities have significantly influenced soil formation in the park. Native forests have been cleared and developed for farming and other uses. Cultivation has accelerated erosion on sloping soils; wet soils have been drained; and manure, lime, chemical fertilizers, and pesticides have been applied in cultivated areas. Cultivation has changed soil structure, increased compaction, and lowered the content of organic matter. Figure 17 shows an area where cobbles from the soil surface have been stacked to build stone walls and to clear fields for agriculture. Agriculture plays an important role in managing the landscape of the park today. Nearly 3,000 acres are leased for agricultural production in the park. These leased lands provide food and shelter for wildlife and help preserve the rural character of the landscapes in the river valley. Corn, wheat, hay, and oats are the chief crops grown in the park. Without farming, the fields would quickly turn into forest. Farmed fields are part of the cultural landscape and depict the historical appearance of some areas of the park.

Time

Time is an important factor affecting soil formation. Over time, soils exhibit features that reflect the interaction of the other soil-forming factors. Recently deposited material, such as material deposited by a flood, does not exhibit features from soil development activities and has properties that are unchanged by soil formation. If the previous surface soil and underlying horizons become buried, the clock resets for formation of the soil. The different horizons in a soil profile and the degree of



Figure 17.—A rock wall built in an old field that has been cleared of cobbles by human activities near Millbrook Village.

development can be directly related to time. Terraces above an active flood plain, while similar in origin to the flood plain, are older land surfaces. The soils on the terraces therefore exhibit more horizon development than the soils on the flood plains. The least developed soils in the park formed in postglacial alluvium, which comprises the youngest geomorphic surfaces of river terraces and flood plains and includes the alluvium along the Delaware River. Fluvaquents, Udifluvents, and Atherton, Colonie, Delaware, Holly, Scio, Unadilla, and Wallkill soils are on this landscape. These soils tend to have weakly expressed horizons because the soil-forming processes are interrupted with each new deposition of fresh alluvium. Glaciers advanced over the area that is now the park and reached a maximum extent roughly 22,000 years ago. They then receded. The glacial deposits are geologically young, but enough time has elapsed for the initial parent material to weather into soils that have distinct horizons.

A model describing how time has acted as a soil forming factor and the resultant degree of horizonation in the soils in the park can be developed by looking at specific soils. The youngest soils in the park in terms of "soil age" are the Fluvents, Fluvaquents, Holly soils, and Udifluvents. These soils have minimal soil horizonation and different parent materials. All of these soils are on the flood plains at the lowest elevations, are subject to flooding, and are classified as Entisols, which are the least developed soils.

Next in terms of age are the soils in the higher positions on flood plains. They are more stable because they are rarely flooded, so they have had more stable soil-forming time to develop horizonation as compared to the Fluvents. These soils have a simple ABC profile. Craigsville, Delaware, Philo, Pope, and Wyoming soils are examples. The B horizon is a subsoil zone of accumulation of materials moved from O, A, or E horizons or of soil material formed in place. Most of these soils have been farmed and therefore do not have an O horizon. Color has an important part in distinguishing the B horizon, which is the horizon of maximum accumulation of dissolved or suspended materials, for example, iron, clay, or calcium carbonate. Not all soils have a B horizon. The B horizon in the soils in the higher positions on flood plains show some color change and weak structure. These soils are Inceptisols.

Next in terms of degree of development, or "age," are the Brinkerton soils, which formed in colluvium derived from acid gray shale and siltstone. The nearly level to sloping Brinkerton soils are on concave footslopes and around heads of drainageways. These soils have ABC horizonation and have greater development than the Inceptisols mentioned above. The Brinkerton soils have stronger structure than the Inceptisols and have a zone of clay accumulation in the B horizon. The Brinkerton soils have moderately slow permeability in the upper part of the B horizon and slow permeability in the fragipan. The restricted permeability results in seasonal wetness in the soil. The Brinkerton soils are classified as Alfisols. Other soils that have translocated clay are Hazen, Phelps, Venango, and Wallpack soils.

Bedington, Buchanan, Clymer, Cookport, and Laidig soils are examples of the soils that could be considered the "oldest" in terms of soil profile development. They have different subsoil chemistry than the Alfisols due to leaching of cations. Alternatively, the parent material may have had fewer cations available to leach initially than the parent materials of the Alfisols. As mentioned earlier, the other soil forming factors influence how we perceive time of formation or soil age. Most of the soils in the park are Entisols, Inceptisols, or Histosols (organic soils). There are Alfisols and Ultisols of minor extent in the southern portion of the park, south of the Delaware Water Gap. These Alfisols and Ultisols are typically minor components of map units and are in landscape positions that may not have been glaciated. Because of the amount of time available and the weathering conditions, soils would not have developed to Ultisols or Alfisols since the last glaciation. It is significant that Ultisols and Alfisols are only south of the Delaware Water Gap. This suggests the degree of glaciation was less south of the gap, and some landscape positions may have been spared being scraped by the ice.

Although the exact origin or genesis of these older soils is difficult to determine, a couple scenarios may be proposed for the presence of Ultisols and Alfisols directly south of the Delaware Water Gap. This area is in the vicinity of the terminus of the Wisconsinan continental glacier that receded from the area approximately 22,000 years ago. The forces of glacial erosion were not as strong near the terminus of a glacier due to thinning of the ice sheet, which is the result of the ice melting as it advanced. Because of this reduction in erosive power, pre-existing soils in the area may not have been as affected by the glacier as the soils farther north. In some places, the pre-existing soils may have been completely unaffected. This may explain why residual soils, such as Bedington, Brinkerton, Clymer, and Cookport soils, are found in this part of the park—they were not destroyed or displaced by the glacier.

The colluvial Buchanan and Laidig soils are Ultisols. As with the residual soils, they may be pre-existing soils that were left partly or fully undisturbed due to their proximity to the terminus of the glacier. Alternately, they may be the result of the glacier reworking pre-existing soils that were not completely obliterated but instead were displaced and redistributed within short distances. These pre-existing soils would have possessed the physical and chemical properties that are more typical of Ultisols. These properties may have remained intact even after the soils were reworked by the glacier, resulting in the formation of Wisconsinan-age soils that have the physical and chemical properties of much older soils but are best described as Ultisols. As these pre-existing soils were locally displaced and redistributed, the parent material created by their disturbance may have had morphology consistent with soil material transported downslope by gravity. The soils, therefore, are considered colluvial deposits, even though the overall mechanism of their transport may have been local transport by the glacier.

Topography and Relief

Topography refers to the shape of the landscape, and relief refers to differences in elevation. The overall landscape of an area, including river terraces, rolling hills, and steep mountains, is the result of erosion and depositional processes. These processes may have occurred in response to changes in climate, fluctuating sea levels, and tectonic activities. Cyclic periods of landscape stability and instability influence the types of soils that form.

Relief influences soil formation mainly through its effect on runoff and erosion. It also influences soil temperature, plant cover, depth to a water table, and the accumulation and removal of organic matter. Water that runs off the more sloping soils can collect in depressions or drainageways. Because relief causes differences in external soil drainage, relief can differentiate soils that formed in the same kind of parent material. The Alden and Swartswood soils in the park illustrate this differentiation. These soils both formed in till derived from sandstone and conglomerate. The nearly level to steep Swartswood soils are well drained. They are on upland summits and side slopes where there is external drainage. The nearly level Alden soils are very poorly drained. They are in depressions and drainage ways that receive runoff from the upland areas.

Slope and aspect of the overall landscape can affect the moisture and temperature of the soil. Like a south-facing side of a house is warmer than a north-facing side, steep slopes facing the sun are warmer than more level soils facing other directions. Steep soils can erode and lose their surface horizons as they form. Thus, steeper soils may be thinner than more nearly level soils that receive deposits from areas upslope. Deeper, darker soils may be expected on the bottom land. Soil-forming factors continue to affect soils even on "stable" landscapes. Materials are deposited on their surface, and materials are blown or washed away from their surface. Additions, removals, and alterations can be slow or rapid, depending on climate, landscape position, and biological activity.

Relief varies greatly in the park. On the alluvial deposits in the Delaware Valley, the soils generally have broad, gentle slopes. Some areas along the river are nearly level. The glaciofluvial deposits in both the Upper Delaware Valley and the Kittatinny Valley also formed soils having broad, gentle slopes. Some steep slopes are present as well.

Relief is more pronounced on Walpack Ridge, on Kittatinny Mountain, and in some areas of shale and limestone in the Kittatinny Valley. The relief is affected by the bedrock-controlled topography and consists of steep side slopes and undulating summits. The differences in relief in the bedrock-controlled areas are due to differences in resistance to destruction by the glacier. Hard bedrocks, such as the conglomerate of the Shawangunk Formation that makes up Kittatinny Mountain, were not broken apart and carried away by the glacier (Witte, 1997). The glacier did, however, polish these bedrock types as it passed over. The resistance of the rock to glacial action left behind the prominent ridge of Kittatinny Mountain. Conversely, the shale and limestone in the Kittatinny Valley were less resistant to destruction, so the glacier gouged deep valleys into these types of bedrock. Some of the valleys were subsequently filled with glaciofluvial deposits as the melting glacier receded (Witte, 1997). In parts of the Kittatinny Valley where the bedrock was not broken off and carried away, the glacier left rounded knolls of shale bedrock and jagged outcroppings of limestone bedrock. This accounts for Walpack Ridge in the park.

The Pennsylvania side of the Delaware River has a steep escarpment running east of the Mosiers Knob Road. On the top of the escarpment are the shallow Benson soils, which are associated with rock outcrop, and the deeper Mardin soils, which have a fragipan. Lackawanna and Bath soils are along the sides of the escarpment, which grades down to Wyoming and Pope soils on terraces and flood plains. Udifluvents are on low-lying islands. The Pope soil is on the vegetated islands in the river that have greater relief and better drainage than the lower lying islands. Figure 18 illustrates typical relationships of soil and landscape in this area of the park.



Figure 18.—Relationships of soils and landscape position on the Pennsylvania side of the Delaware River near the boat ramp on the Poxono River.

If left unvegetated, most of the soils in the park are affected by slope instability and high erosion rates. The geologic units underlying the slopes of the park contain a heterogeneous mix of shale, sandstone, siltstone, limestone, dolomite, conglomerate, and mudstone. Clay-rich units (e.g., shale and mudstone) may disintegrate when they become saturated and are prone to fail when exposed on a slope. Where more resistant rock units, such as conglomerates, sandstone, and limestone, are located above weaker units, undercutting occurs due to preferential erosion and can cause rock fall hazards. The Dekalb series is an example of soils that are moderately deep, well drained, and formed in residuum from interbedded shale and siltstone. These soils are on gently sloping to very steep, dissected mountain uplands.

Figures 19, 20, and 21 are stylized block diagrams of the typical soils and landscapes in the park. Some landscape positions and parent materials favor the development of certain profile characteristics or diagnostic horizons. Brinkerton, Clarksburg, Comly, Cookport, Readington, Venango, and Wallpack soils all have a dense horizon called a "fragipan." Fragipans are common in this part of the northeastern United States. The fragipan has a low content of organic matter and a high bulk density in relation to other horizons above it. The fragipan restricts water movement through the soils. The effects of restricted water movement can be seen in soil profiles as grey colors. It is not known exactly how and why fragipans form, but some generalizations can be made about them. They show evidence of pedogenesis, usually as clay movement; they have a higher content of silt and/or very fine sand than geographically associated soils without fragipans; they occur at depths where the soil does not freeze; and they typically formed under forested vegetation (Soil Survey Staff, 1999). All soils that have a fragipan are named with "fragi" as part of their taxonomic classification (tables 21 and 22).

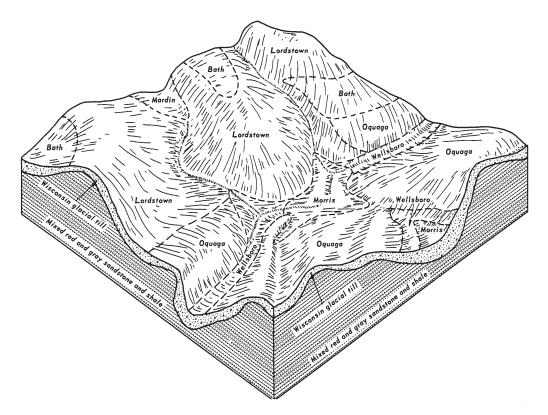


Figure 19.—Typical relationship of soils to parent material, underlying rock formations, and landscape position in the northern part of the park, east of the Delaware River. This diagram was originally published in the Soil Survey of Monroe County, Pennsylvania (USDA-SCS, 1981).

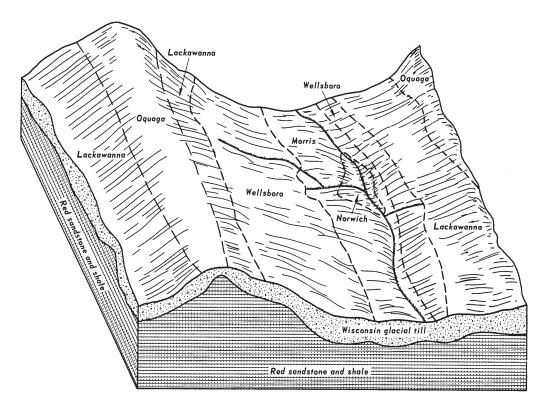


Figure 20.— Typical relationship of soils to parent material, underlying rock formations, and landscape position. The Norwich soils are of minor extent in the survey area. This diagram was originally published in the Soil Survey of Monroe County, Pennsylvania (USDA–SCS, 1981).

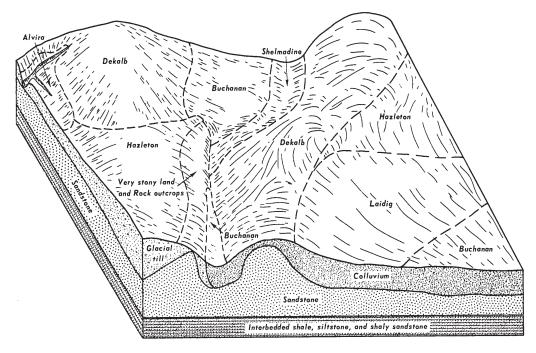


Figure 21.— Typical relationship of soils to parent material, underlying sandstone, and landscape position. This diagram is pertinent to park lands south of the Delaware Water Gap near Mt. Minsi. This diagram was originally published in the Soil Survey of Monroe County, Pennsylvania (USDA-SCS, 1981).

Processes of Soil Horizon Differentiation

The soil profile provides a record of the activities of the five soil-forming factors. It consists of a succession of layers, or horizons, extending from the surface down to the parent material. The horizons differ in one or more properties, for example, thickness, color, texture, structure, consistence, porosity, and reaction (pH).

Numerous processes of soil formation result in the development of soil horizons (Buol and others, 2011). In the park, some of the main processes are lessivage, enrichment, decomposition, synthesis, and leaching. Lessivage is the physical movement of small mineral particles from one area of the profile to another. An example is movement of small clay particles downward in the profile. Enrichment is the addition of material to soil, such as the addition of fine sand and silt to the surface of the Wallpack soils on Walpack Ridge or the addition of plant litter to the surface of forested soils, such as Swartswood soils. Decomposition is the breakdown of minerals or organic material to new, more stable materials. Synthesis is the formation of new minerals or organic materials. Leaching is the translocation of materials in solution from one horizon to another or their removal from the soil entirely.

Soil profiles commonly consist of up to six major horizons or layers, designated as O, A, E, B, and C horizons and R layers.

The O horizon consists of decomposing organic materials.

The A horizon is a mineral horizon that has a higher content of organic matter than that of the underlying horizons but less than that of the overlying O horizons. The A horizon may be the surface layer if there is no O horizon.

The E horizon is a zone of maximum leaching of materials that are usually lighter in color than horizons above or below. It typically occurs in wetter climates or wetter soil conditions on certain landscapes.

The B horizon is a subsoil zone of accumulation of materials moved from O, A, or E horizons or of soil material formed in place. It is the horizon of maximum accumulation of dissolved or suspended materials, for example, iron, clay, or calcium carbonate. Color has an important part in distinguishing B horizons. Not all soils have a B horizon.

The C horizon is typically in the bottom part of a soil profile and has properties similar to those of the parent material. It can be at the surface in undeveloped soils, such as dune soils. The C horizon is relatively unchanged by the soil-forming processes. The C horizon in the Delaware soils is an example.

The R layer is hard bedrock, but it may be fractured. In the park, an R layer underlies many of the soils. Chert or sandstone bedrock is common. The Oquaga soils, for example, have an R layer.

Pedogenesis in the Delaware soil

Delaware soils provide a good example to illustrate the factors of soil formation and the processes of soil horizonation, or "pedogenesis." The type location for the Delaware series is in the park (page 392). Most of the acreage of Delaware soils is along the Delaware Valley river corridor. These soils formed in alluvium. They are mostly dark yellowish brown and are very deep. All five factors of soil formation can be identified in this soil as well as the soil-forming processes of lessivage, leaching, decomposition, enrichment, and synthesis.

Interactions of Soil-Forming Factors

Topography, parent material, and time.—Delaware soils are on level terraces along the river. Because they are in relatively stable positions, they do not erode like the soils on steep uplands. Over time, the Delaware soils have become very deep and have developed some horizon differentiation. They formed in alluvium from the surrounding, eroding hillslopes and inherited their texture from soils eroding from the nearby hillslopes. The upland soils developed from conglomerates and sandstone.

Soil material has been moved from one area to another (enrichment). The change in color and structure is due to the process of lessivage, the process of decomposition of primary minerals, and the subsequent synthesis of new soil minerals and stabilized organic materials. Primary minerals are the unweathered, original minerals that comprise a rock.

Topography, organisms, and climate.—Delaware soils have a surface A horizon that is darkened due to its high content of organic matter. Decomposition of roots, leaves, and stems by soil microbes results in a surface horizon that is enriched with newly synthesized soil organic matter. The high content of organic matter is due to the higher plant productivity of the soils as well as to the wetter soil microclimate conditions that reduce the rates of organic matter oxidation. Map units containing Delaware soils are classified as prime farmland.

Soil Horizonation

The typical pedon for the Delaware soil has an O horizon. In active farming areas, the O horizon is plowed and mixed into the A horizon. The A horizons in these soils have an accumulation of stable organic matter mixed with mineral soil material. The surface A horizons, as described by the soil scientists mapping the area, appear to have been plowed to a depth of 11 inches at some time in the past. The mixing of a soil is a soil-forming process called "pedoturbation." The Delaware soils have two A subhorizons, both of which have been plowed. The plowing is indicated by the Ap designation in the typical pedon (page 393).

Below the Ap horizons, at about 11 inches below the surface, the Delaware soils have a B horizon. The B horizon extends to a depth 33 of inches. It formed due to lessivage resulting in change of soil structure.

Below the B horizon, at a depth of 33 to 41 inches, is a transitional BC horizon that displays more characteristics of the underlying parent material.

Below a depth of 41 inches, the Delaware soils have a C horizon that is relatively unaltered and closely related to the original glacial parent material.

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487–00.

Buol, S.W., R.J. Southard, R.C. Graham, and P.A. McDaniel. 2011. Soil genesis and classification. 6th edition.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS_79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Jenny, Hans. 1941. Factors of soil formation.

Means, J. 1995. Maryland's Catoctin Mountain parks: An interpretive guide to Catoctin Mountain Park and Cunningham Falls State Park.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson, editors. 2002. Field book for describing and sampling soils. Version 2.0. U.S. Department of Agriculture, Natural Resources Conservation Service.

Simonson, Roy W. 1959. Outline of a generalized theory of soil genesis. Soil Science Society of America Proceedings 23:152–156.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y–87–1.

United States Department of Agriculture, Agricultural Research Service. 1997. Predicting soil erosion by water: A guide to conservation planning with the Revised Universal Soil Loss Equation (RUSLE). Agriculture Handbook Number 703. http://www.ars.usda.gov/SP2UserFiles/Place/64080530/RUSLE/AH_703.pdf.

United States Department of Agriculture, Natural Resources Conservation Service, and United States Department of the Interior, National Park Service. 2013. Soil survey of Bluestone National Scenic River, West Virginia.

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430–VI. http://soils.usda.gov/technical/.

United States Department of Agriculture, Natural Resources Conservation Service. 2008. National soil survey handbook. Accessed 9 July 2012. ftp://ftp-fc.sc.egov.usda.gov/NSSC/Soil_Survey_Handbook/629_glossary.pdf.

United States Department of Agriculture, Natural Resources Conservation Service. 2009. Soil survey of Sussex County, New Jersey. http://soils.usda.gov/survey/online_surveys/new_jersey/sussexNJ2009/Sussex_NJ.pdf.

United States Department of Agriculture, Natural Resources Conservation Service. 2010. Field indicators of hydric soils in the United States, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble, editors.

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.

United States Department of Agriculture, Soil Conservation Service. 1981. Soil Survey of Monroe County, Pennsylvania. http://soildatamart.nrcs.usda.gov/manuscripts/PA089/0/Monroe.pdf.

Williamborg. 2009. Freezing air ice lens formation. Accessed 11 July 2012. http://en.wikipedia.org/wiki/File:Freezing_air_ice_lens_formation.ipg.

Witte, R.W. 1997. Late Wisconsinan glacial history of the upper part of the Kittatinny Valley, Sussex and Warren Counties, New Jersey. Northeastern Geology and Environmental Sciences 19(3):155–169.

Witte, R.W. 2012. Quaternary geology and geologic material resources of the Newton West quadrangle, Sussex and Warren Counties, New Jersey. Open file map 90. New Jersey Geological and Water Survey.

Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the "National Soil Survey Handbook" (available in local offices of the Natural Resources Conservation Service or on the Internet).

ABC soil. A soil having an A, a B, and a C horizon.

Ablation till. Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial fan. A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

431

- **Base saturation.** The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.
- **Base slope** (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).
- **Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
- **Bedrock-controlled topography.** A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.
- **Bench terrace.** A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.
- Bottom land. An informal term loosely applied to various portions of a flood plain.
- Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.
- **Breaks.** A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.
- **Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.
- **Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.
- Canopy. The leafy crown of trees or shrubs. (See Crown.)
- **Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.
- **Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
- **Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
- **Channery soil material.** Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.
- Chemical treatment. Control of unwanted vegetation through the use of chemicals.
- **Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- Clay depletions. See Redoximorphic features.
- **Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
- **Claypan.** A dense, compact, slowly permeable subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. A claypan is commonly hard when dry and plastic and sticky when wet.
- Coarse textured soil. Sand or loamy sand.
- **Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
- **Cobbly soil material.** Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter.

- Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.
- COLE (coefficient of linear extensibility). See Linear extensibility.
- **Colluvium.** Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.
- **Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
- **Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.
- Concretions. See Redoximorphic features.
- Conglomerate. A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.
- **Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.
- Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."
- **Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.
- **Coprogenous earth (sedimentary peat).** A type of limnic layer composed predominantly of fecal material derived from aquatic animals.
- **Corrosion** (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.
- **Corrosion** (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.
- **Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.
- **Crown.** The upper part of a tree or shrub, including the living branches and their foliage. **Delta.** A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.
- **Dense layer** (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.
- **Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.
- **Diatomaceous earth.** A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.
- **Dip slope.** A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

- **Diversion (or diversion terrace).** A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.
- Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."
- Drainage, surface. Runoff, or surface flow of water, from an area.
- **Drainageway.** A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.
- **Drift.** A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.
- **Drumlin.** A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.
- **Duff.** A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.
- **Dune.** A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.
- **Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.
- **Eolian deposit.** Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.
- **Ephemeral stream.** A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.
- **Episaturation.** A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.
- **Erosion.** The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.
 - *Erosion* (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.
 - *Erosion* (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

- **Erosion surface.** A land surface shaped by the action of erosion, especially by running water.
- **Escarpment.** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.
- **Esker.** A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.
- **Fan remnant.** A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.
- **Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.
- **Fibric soil material (peat).** The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.
- **Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity.*
- **Fill slope.** A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.
- Fine textured soil. Sandy clay, silty clay, or clay.
- **Flaggy soil material.** Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.
- **Flagstone.** A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.
- **Flood plain.** The nearly level plain that borders a stream and is subject to flooding unless protected artificially.
- **Flood-plain landforms.** A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, floodplain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.
- **Flood-plain splay.** A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.
- **Flood-plain step.** An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.
- Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.
- **Foothills.** A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).
- **Footslope.** The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).
- **Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.

- **Forest type.** A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.
- **Fragipan.** A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.
- **Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.
- **Glaciofluvial deposits.** Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.
- **Glaciolacustrine deposits.** Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.
- **Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.
- **Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.
- **Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.
- **Ground water.** Water filling all the unblocked pores of the material below the water table.
- **Hard bedrock**. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.
- Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.
- **Hardpan.** A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.
- **Head slope** (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.
- **Hemic soil material (mucky peat).** Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.
- **Hill.** A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.
- **Hillslope**. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.
- Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:
 - O horizon.—An organic layer of fresh and decaying plant residue.

- *L horizon.*—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.
- A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.
- *E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.
- B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.
- C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.
- Cr horizon.—Soft, consolidated bedrock beneath the soil.
- R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.
- **Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.
- Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.
- **Illuviation.** The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.
- **Impervious soil.** A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.
- **Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.
- **Infiltration capacity.** The maximum rate at which water can infiltrate into a soil under a given set of conditions.
- **Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.
- **Intake rate.** The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

- **Interdrumlin.** Concave to relatively flat-bottomed, roughly linear depressions ranging from small saddles or swales to small valleys that separate drumlins or drumlinoid ridges in drumlin fields. Streams, if present, have not had a dominant impact on the formation of the depression.
- **Interfluve.** A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.
- Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.
- Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.
- Iron depletions. See Redoximorphic features.
- **Irrigation.** Application of water to soils to assist in production of crops. Methods of irrigation are:
 - Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.
 - Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.
 - Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.
 - Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.
 - *Drip (or trickle).*—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.
 - Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.
 - Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.
 - Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.
 - Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.
- Kame. A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.
- Kame terrace. A terrace-like ridge consisting of stratified sand and gravel (a) deposited by a meltwater stream flowing between a melting glacier and a higher valley wall or lateral moraine and (b) left standing after the disappearance of the ice. It is commonly pitted with "kettles" and has an irregular ice-contact slope.
- **Knoll.** A small, low, rounded hill rising above adjacent landforms.
- **K**_{sat} Saturated hydraulic conductivity. (See Permeability.)
- **Lacustrine deposit.** Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.
- **Lake terrace.** A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.
- **Landslide.** A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward

- deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.
- **Large stones** (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.
- **Leaching.** The removal of soluble material from soil or other material by percolating water
- Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at ¹/₃- or ¹/₁₀-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.
- **Liquid limit.** The moisture content at which the soil passes from a plastic to a liquid state.
- **Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.
- **Loess.** Material transported and deposited by wind and consisting dominantly of silt-sized particles.
- **Low strength.** The soil is not strong enough to support loads.
- **Map unit.** A map unit is a collection of areas defined and named the same in terms of their soil components or miscellaneous (nonsoil) areas or both. Each map unit differs in some respect from all others in a survey area, and each has a symbol that uniquely identifies the map unit on a soil map. Each individual polygon, point, or line so identified on the map is referred to as a delineation.
- Map unit component. A distinct kind of soil, generally a phase of a taxonomic unit, or miscellaneous (nonsoil) area within a soil map unit. Components can be categorized as either major or minor. The names of major components are used to name the map unit. Each component of a map unit has a unique set of soil properties that differentiates it from other components within the same map unit. Each is assigned a designated range in proportionate extent (percent) within the map unit.
- **Marl.** An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.
- **Mass movement.** A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.
- Masses. See Redoximorphic features.
- **Meander belt.** The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.
- **Meander scar.** A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.
- **Meander scroll.** One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.
- **Mechanical treatment.** Use of mechanical equipment for seeding, brush management, and other management practices.
- **Medium textured soil.** Very fine sandy loam, loam, silt loam, or silt.
- **Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

- **Miscellaneous area.** A kind of map unit that has little or no natural soil and supports little or no vegetation.
- **Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.
- Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.
- **Mollic epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.
- **Moraine.** In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.
- **Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.
- **Mottling, soil.** Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—few, common, and many; size—fine, medium, and coarse; and contrast—faint, distinct, and prominent. The size measurements are of the diameter along the greatest dimension. Fine indicates less than 5 millimeters (about 0.2 inch); medium, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and coarse, more than 15 millimeters (about 0.6 inch).
- **Mountain.** A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.
- **Muck.** Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)
- **Mudstone.** A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.
- **Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.
- **Natric horizon.** A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.
- **Neutral soil.** A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.) **Nodules.** See Redoximorphic features.
- **Nose slope** (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slopewash sediments (for example, slope alluvium).
- **Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
	more than 8.0 percent

Outwash. Stratified and sorted sediments (chiefly sand and gravel) removed or "washed out" from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain. An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Outwash terrace. A flat-topped bank of outwash with an abrupt outer face (scarp or riser) extending along a valley downstream from an outwash plain or terminal moraine; a valley train deposit.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan*, *fragipan*, *claypan*, *plowpan*, and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.
Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Plowpan. A compacted layer formed in the soil directly below the plowed layer. **Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

- Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
 - A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; and
 - B. Masses, which are noncemented concentrations of substances within the soil matrix; and
 - C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
- Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both ironmanganese oxides and clay have been stripped out, including:
 - A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; and
 - B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
- 3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

- **Relief.** The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.
- **Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.
- **Rill.** A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.
- **Riser.** The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.
- **Road cut.** A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.
- **Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.
- **Root zone.** The part of the soil that can be penetrated by plant roots.
- **Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called groundwater runoff or seepage flow from ground water.
- **Saline soil.** A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.
- **Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.
- Sandstone. Sedimentary rock containing dominantly sand-sized particles.
- **Sapric soil material (muck).** The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.
- Saturated hydraulic conductivity (K_{sat}). See Permeability.

- **Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.
- **Sedimentary rock.** A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.
- **Series, soil.** A group of soils that have profiles that are almost alike. All the soils of a given series have horizons that are similar in composition, thickness, and arrangement.
- **Shale.** Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.
- **Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
- **Shoulder.** The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.
- **Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.
- **Side slope** (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.
- **Silica.** A combination of silicon and oxygen. The mineral form is called quartz.
- **Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.
- **Siltstone.** An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.
- **Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.
- **Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.
- **Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.
- **Slope alluvium.** Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.
- **Slow refill** (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.
- **Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

- **Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.
- **Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

- **Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.
- **Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.
- **Stony.** Refers to a soil containing stones in numbers that interfere with or prevent tillage.
- **Stream terrace.** One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.
- Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—platy (laminated), prismatic (vertical axis of aggregates longer than horizontal), columnar (prisms with rounded tops), blocky (angular or subangular), and granular. Structureless soils are either single grain (each grain by itself, as in dune sand) or massive (the particles adhering without any regular cleavage, as in many hardpans).
- **Stubble mulch.** Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.
- **Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth. **Substratum.** The part of the soil below the solum.
- **Subsurface layer.** Any surface soil horizon (A, E, AB, or EB) below the surface layer. **Summit.** The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.
- **Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."
- **Surface soil.** The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.
- **Talf.** A geomorphic component of flat plains (e.g., lake plain, low coastal plain, low gradient till plain) consisting of an essentially flat (0 or 1 percent slopes) and broad area dominated by closed depressions and a nonintegrated or poorly integrated drainage system. Precipitation tends to pond locally, and lateral transport is slow both above and below ground, favoring the accumulation of organic matter and the retention of fine-earth sediments. Better drained soils are commonly adjacent to drainageways.

- **Talus.** Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.
- **Taxadjuncts.** Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.
- **Terminal moraine.** An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.
- **Terrace** (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.
- **Terrace** (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.
- **Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, and clay. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."
- **Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use.
- **Till.** Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.
- **Till plain.** An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.
- **Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.
- **Toeslope.** The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.
- **Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
- **Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.
- **Tread.** The flat to gently sloping, topmost, laterally extensive slope of terraces, floodplain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.
- **Unstable excavation walls** (in tables). The walls of excavations tend to cave in or slough.
- **Upland.** An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation

- than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.
- **Valley train.** A long, narrow body of outwash confined within a valley beyond a glacier; it may emerge from the valley and join an outwash plain.
- Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.
- **Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.
- **Weathering.** All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.
- **Wilting point (or permanent wilting point).** The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.
- **Windthrow.** The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Soil Legend

Map unit symbol and map unit name	 Components in map unit 	Pct. of map unit
290836 Hoosic-Otisville complex, 25 to 60 percent slopes, very stony	 Hoosic, very	 50
	stony Otisville, very	 40
	stony Hazen, very stony	 10
296265 Alden mucky silt loam	 Alden	 100
296269 Alluvial land	 Fluvents, (alluvial land)	 70
	 Holly 	 20
296271 Alvira and Watson very stony loams, 0 to 12 percent slopes	 Alwire	 55
	Watson Shelmadine	35 35 10
	 Bath Lackawanna Mardin	85 5 5
	 Bath Lackawanna Mardin	 85 5
296274 Bath channery silt loam, 15 to 25 percent slopes	 	3 85 5 5
296275 Bath very stony silt loam, 0 to 8 percent slopes	 Bath	 90
296276 Bath very stony silt loam, 8 to 25 percent slopes	 Bath 	 90
296277 Benson-Rock outcrop complex, 0 to 8 percent slopes	 Benson Rock outcrop 	 55 15
296278 Benson-Rock outcrop complex, 8 to 25 percent slopes	 Benson Rock outcrop	 60 20
296279 Benson-Rock outcrop complex, 25 to 70 percent slopes	 Benson Rock outcrop	 60 25
	 Braceville Rexford, poorly drained	 90 10
296281 Braceville gravelly loam, 3 to 8 percent slopes	Ì	90 5

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of map unit
296283 Buchanan extremely stony loam, 0 to 8 percent slopes	 	 90 5
296288 Chippewa and Norwich silt loams, 0 to 5 percent slopes	 Chippewa Norwich	 48 48
296289 Chippewa and Norwich extremely stony soils, 0 to 8 percent slopes	 Chippewa Norwich	 47 47
296295 Cut and fill land	 Udorthents, cut and fill	 90
296297 Dekalb extremely stony loam, 8 to 25 percent slopes	 Dekalb 	 100
296298 Dekalb extremely stony loam, 25 to 80 percent slopes	 Dekalb	 100
296303 Hazleton extremely stony sandy loam, 8 to 25 percent slopes	 Hazleton	 100
296304 Holly silt loam	 Holly	1 100
	 Lackawanna Bath Lordstown Mardin Oquaga Wellsboro 	40 30 5 5 5
	 Lackawanna Bath Wellsboro	 80 5 5
296313 Lackawanna channery loam, 8 to 15 percent slopes	 Lackawanna Bath Lackawanna 	 80 5 5
	 Lackawanna Bath Wellsboro 	 80 5 5
	 Lackawanna Bath Wellsboro	 80 5
296317 Laidig extremely stony loam, 0 to 8 percent slopes	 Laidig	 100
	 Lordstown Arnot Bath Oquaga	 85 5 5

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	 Components in map unit 	 Pct. of map unit
296327 Lordstown extremely stony silt loam, 8 to 25 percent slopes	 	 85 5 5
296328 Lordstown and Oquaga extremely stony soils, 25 to 70 percent slopes	 - Lordstown Oquaga	 40 35
296329 Mardin channery silt loam, 2 to 8 percent slopes	 	 85 5 3 2
296330 Mardin channery silt loam, 8 to 15 percent slopes	 Mardin Volusia Bath Chippewa	 85 5 3 2
296331 Mardin very stony silt loam, 0 to 8 percent slopes	 Mardin Lordstown Volusia Chippewa	 85 6 5
296332 Mardin very stony silt loam, 8 to 25 percent slopes	 	 87 8 3 1
296335 Meckesville gravelly loam, 8 to 15 percent slopes	 - Meckesville	 100
296337 Meckesville very stony loam, 8 to 25 percent slopes	 - Meckesville	 100
296338 Morris channery silt loam, 2 to 10 percent slopes	 - Morris Norwich	 80 20
296339 Morris extremely stony silt loam, 0 to 8 percent slopes	 Morris Norwich	 75 25
296340 Morris extremely stony silt loam, 8 to 20 percent slopes	 - Morris Norwich	 80 20
296341 Mucky peat, deep	 - Freetown, mucky peat 	 100
296342 Mucky peat, shallow	 - Paupack, mucky peat (shallow)	 100
296343 Oquaga-Lackawanna channery loams, 3 to 8 percent slopes	 Oquaga Lackawanna 	 50 35

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	•	 Pct. of map unit
296344 Oquaga-Lackawanna channery loams, 8 to 15 percent slopes	 Oquaga Lackawanna	 55 30
296346 Oquaga-Lackawanna extremely stony loams, 0 to 8 percent slopes	 Oquaga Lackawanna	 50 35
296347 Oquaga-Lackawanna extremely stony loams, 8 to 25 percent slopes	 Oquaga Lackawanna	 60 30
296348 Philo silt loam	 Philo Holly	 85 10
296349 Pope silt loam	 Pope Holly	 90 8
296350 Pope silt loam, high bottom	 Pope Holly	
296351 Rexford gravelly silt loam, 0 to 3 percent slopes	 Rexford,	 40
	somewhat poorly drained Rexford, poorly drained	l
296355 Sheffield silt loam	 Sheffield	 100
296363 Very stony land and Rock outcrops, steep	 Dystrochrepts, very stony	
296369 Wayland silty clay loam	 Wayland 	
296376 Wellsboro channery loam, 3 to 8 percent slopes	 Wellsboro Morris Norwich Lackawanna	 80 8 8
296379 Wellsboro extremely stony loam, 8 to 25 percent slopes	Lackawanna Norwich	 85 8
296385 Wyoming gravelly sandy loam, 0 to 3 percent slopes	Morris Wyoming Braceville Unadilla	2 85 5
296386 Wyoming gravelly sandy loam, 3 to 8 percent slopes	i I	 85 5
	Unadilla	5

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of map unit
296387 Wyoming gravelly sandy loam, 8 to 15 percent slopes	 - Wyoming Braceville Unadilla	 85 7 5
296388 Wyoming gravelly sandy loam, 15 to 25 percent slopes	 Wyoming Unadilla	 85 5
296389 Wyoming gravelly sandy loam, 25 to 70 percent slopes	 Wyoming 	 100
296390 Water	 Water	 100
297185 Edgemere-Shohola complex, 3 to 15 percent slopes, very rubbly	 	 42 42 11 5
	 - Edgemere Shohola Mardin Freetown Wyalusing	 75 10 7 4
	 Manlius Arnot Rock outcrop Mardin Rubble land	 40 35 15 6
	 Manlius Arnot Rock outcrop Mardin	 40 35 15
297190 Braceville fine sandy loam	Rubble land Braceville Wyoming Chenango Rexford, poorly drained	4 82 9 6 3
297191 Wyalusing fine sandy loam	 Wyalusing Barbour Craigsville Pope	 85 7 6
297192 Pope fine sandy loam	i I	 95 5
297193 Paupack mucky peat	 Paupack Edgemere Kimbles 	 90 8 2

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit 	Pct. of map unit
297196	i 	i I
Freetown mucky peat	- Freetown Gleneyre	94 6
297197	1	l I
Manlius very channery silt loam, 3 to 8 percent slopes, very bouldery	- Manlius Mardin	90 7
	Edgemere	3
297198 Manlius very channery silt loam, 8 to 15 percent slopes, very bouldery	 - Manlius	I I 86
	Mardin	1 10
	Edgemere Rock outcrop	2 2
297201	 	
Oquaga very stony loam, 15 to 30 percent slopes, extremely bouldery		75
	Wellsboro Rock outcrop	7 6
	Lackawanna	1 5
	Shohola	2
297203	 	 93
Delaware fine sandy loam, 0 to 3 percent slopes	Pope	93
	Chenango	, 2
	Barbour	1
297204 Delaware fine sandy loam, 3 to 8 percent slopes	 - Dolaware	 82
belaware line sandy loam, 3 to 6 percent slopes	Chenango	1 9
	Pope	6
	Barbour] 3]
297205 Delaware fine sandy loam, 8 to 20 percent slopes	 - Delaware	I I 80
belaware line bandy roum, o to ro persons bropes	Pope	8
	Barbour	7
	Chenango 	5
297209 Philo loam	 - Philo	l I 85
	Barbour	8
	Chenango	2
	Wyalusing 	2
297210	1	!
Barbour fine sandy loam	- Barbour	85 7
	Pope Philo	/
	Delaware	j 3
297216	 	 92
Wurtsboro stony fine sandy loam, 0 to 8 percent slopes, extremely stony-	- wurtsboro Edgemere	92
	Shohola	3
	Oquaga 	2
297217 Wurtsboro stony fine sandy loam, 8 to 15 percent slopes, extremely stony-	 - Wurtshoro	 88
	Oquaga	6
	Rock outcrop	4
	Edgemere	1
	Shohola	1

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of map unit
297227	i I	
Arnot very channery loam, 3 to 15 percent slopes, very rocky		88
	Rock outcrop Mardin	6 4
	Lackawanna	1
297228 Arnot very channery loam, 15 to 35 percent slopes, very rocky	 Arnot	 85
	Rock outcrop	. 8
	Mardin	5
	Swartswood 	2
297229 Wyoming very cobbly sandy loam, 3 to 8 percent slopes	 Wyoming	l I 90
	Delaware	1 6
	Braceville	2
	Suncook 	2
297230 Wyoming very cobbly sandy loam, 8 to 15 percent slopes	 Wyoming	l I 90
	Delaware	1 6
	Braceville	2
	Suncook 	2
297231 Wyoming very cobbly sandy loam, 15 to 30 percent slopes	 Wyoming	 90
	Suncook	1 6
	Delaware	3
	Braceville 	1
297236 Suncook loamy sand, 0 to 8 percent slopes	 Suncook	 91
	Wyalusing	4
297237 Mardin channery silt loam, 0 to 8 percent slopes, stony	 Mardin	 85
	Manlius	1 5
	Oquaga	, 5
	Edgemere	3
	Shohola 	2
297238 Mardin channery silt loam, 8 to 15 percent slopes, stony	 Mardin	 85
	Manlius	5
	Oquaga	5
	Edgemere] 3
	Shohola 	2
297239 Mardin stony loam, 0 to 8 percent slopes, extremely stony	 Mardin	 85
	Manlius	J 5
	Oquaga	5
	Edgemere Shohola	3 2
297240	1	
Mardin stony loam, 8 to 15 percent slopes, extremely stony		l 85
	Manlius	J 5
	Oquaga	4
	Edgemere Shohola	3 2
	ISHOHOTA	. 4

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of
297241 Unadilla silt loam	 - Unadilla	 90
Unadilla siit loam	Braceville Suncook	90 6 4
297242	I I	1
Shohola-Edgemere complex, 0 to 8 percent slopes, very rubbly	Shohola Edgemere	62 29
	Mardin 	9
297243 Shohola-Edgemere complex, 8 to 15 percent slopes, very rubbly		 62 29
	Edgemere Mardin	29 9
297244 Lordstown-Swartswood complex, 0 to 8 percent slopes, extremely stony	' - Lordstown	 40
	Swartswood Arnot	35 10
	Rock outcrop Shohola	10 5
297247 Chenango gravelly fine sandy loam, 0 to 8 percent slopes	 - Chanango	 86
chemango graverry rime sandy roam, v to v percent stopes	Delaware	7
	Braceville Philo	3 2
	Unadilla 	2
297248 Chenango gravelly fine sandy loam, 8 to 15 percent slopes	 - Chenango	l l 85
	Delaware Unadilla	9
297249 Chenango gravelly fine sandy loam, 15 to 25 percent slopes	 - Chenango	I I 90
	Delaware	8
297253	Unadilla 	2
Craigsville-Wyoming complex, 0 to 8 percent slopes, extremely stony	 Craigsville Wyoming	50 40
	Wyalusing	6
	Philo Pope	2
297254 Pits, shale, and gravel	 - Pits, gravel	 40
,,	Pits, shale	40
298049	1	I I
Wurtsboro loam, 0 to 8 percent slopes, extremely stony	<pre>- Wurtsboro, extremely stony</pre>	90 -
	Swartswood, extremely stony	10
298050 Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely stony	 - Wurtsboro	 60
Stopes, extremely stony	extremely stony	•
	Swartswood,	I 40

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	· -	 Pct. of map unit
298051 Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely stony		 60
	extremely stony Swartswood, extremely stony	40
298075 Colonie loamy fine sand, 3 to 8 percent slopes	 Colonie Delaware	 80 10
298188	Unadilla 	10
Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes, extremely stony	 Lackawanna, extremely stony	I 85
	Wellsboro, extremely stony	10
	Oquaga, extremely stony 	5
298189 Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes, extremely stony	 Lackawanna,	 85
	extremely stony Wellsboro,	10
	extremely stony Oquaga, extremely stony	J 5
298221 Swartswood loam, 0 to 8 percent slopes, extremely stony	 Swartswood,	 90
	extremely stony Wurtsboro, extremely stony	10
298222 Swartswood loam, 8 to 15 percent slopes, extremely stony	 Swartswood,	 90
	extremely stony Wurtsboro, extremely stony	10
298223 Swartswood loam, 15 to 35 percent slopes, extremely stony	 Swartswood,	 85
	extremely stony Arnot, extremely stony	10
	Lordstown, extremely stony	J 5
298255 Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded	 Delaware,	 80
	rarely flooded Colonie	 10
298256	Unadilla 	10
Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded	rarely flooded	 80
	Colonie Unadilla 	10 10

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	 Pct. of map unit
298257 Wallpack silt loam, 8 to 15 percent slopes	 Wallpack	 85
wallpack Silt loam, 6 to 13 percent Slopes	Cambridge	1 10
	Lordstown	5
298258		
Wallpack silt loam, 15 to 25 percent slopes	Wallpack Cambridge	85 10
	Lordstown	5
298259		
Wallpack silt loam, 3 to 8 percent slopes, extremely stony	Wallpack, extremely stony	85
	Cambridge,	1 10
	extremely stony	•
	Lordstown,	5
	extremely stony	
298260 Wallpack silt loam, 8 to 15 percent slopes, extremely stony	 Wallpack,	 85
	extremely stony	
	Cambridge,	10
	extremely stony Lordstown,	I I 5
	extremely stony	•
298261		
Wallpack silt loam, 3 to 8 percent slopes	Wallpack Cambridge	85 10
	Lordstown	5
298262		
Wallpack silt loam, 15 to 35 percent slopes, extremely stony	Wallpack, extremely stony	85
	Cambridge,	1 10
	extremely stony	İ
	Lordstown,	5
	extremely stony 	
298265 Venango silt loam, 0 to 8 percent slopes, extremely stony	 Venango,	 90
	extremely stony	
	Chippewa, extremely stony	10
298266	 	
Venango silt loam, 8 to 15 percent slopes, extremely stony	Venango, extremely stony	85
	Nassau,	10
	extremely stony	
	Manlius, extremely stony	5
298409	1	1
Swartswood loam, 0 to 8 percent slopes, extremely stony	Swartswood,	90
	extremely stony Wurtsboro,	 10
	extremely stony	•
		İ
298411	l Conomb cons a 3	
298411 Swartswood loam, 8 to 15 percent slopes, extremely stony	Swartswood, extremely stony	90
	Swartswood, extremely stony Wurtsboro,	•

Table 1.--Soil Legend--Continued

298413	Map unit symbol and map unit name	•	 Pct. of map unit
extremely stony 1 1 1 1 1 1 1 1 1	298413	 	
extremely stony		•	
			•
Hazen-Hoosic complex, 3 to 8 percent slopes, very stony 18 18 18 18 18 18 18 1		Lordstown,	J 5
Stony Bloosic, very 35 Stony Oltisville, very 5 Stony Oltisville, very 5 Stony Oltisville, very 5 Stony Oltisville, very 5 Stony Stony Stony Blazen, very 50 Stony Blazen, very 40 Stony Bleosic, very 40 Stony Bleosic, very 40 Stony Bleosic, very 10 Bloosic, very 10 Stony Bleosic, very 10 Stony Stony Stony Stony Stony Stony Stony Stony Stony Blaisey, very 40 Stony Bleosic, very 50 Stony Blaisey, very 10 Stony St		! 	l
stony		· -	60
Octaville, very 5 stony		_	35
Hazen-Hoosic complex, 0 to 3 percent slopes, very stony		Otisville, very	5
Stony	318533	 	
stony Hero, very stony 10 319783		_	50
State Stat		_	40
Catden mucky peat, 0 to 2 percent slopes Catden 85 Alden 13 Wallkill 2 Stony Halsey, very 40 Stony Hero, very 50 Stony Hero, very 50 Stony Hero, very 50 Stony Hare, very stony 10 Stony Hero, very stony 10 Stony Hero, very stony 10 Stony Hare, very stony 10 Suchanan 40 Extremely stony 10 Hazleton 2 Standard 5 Standard 5 Standard 7 Standard 7 Standard 10 Whatton 10 Laidig 5 Standard 5 Standa		Hero, very stony	10
Alden 13 Wallkill 2 2 319784		 	,
Wallkill 2	11 11 11 11 11 11 11 11 11 11 11 11 11		
Fredon-Halsey complex, 0 to 3 percent slopes, very stony		•	
stony Halsey, very 40 stony 10 s	319784	 	
Halsey, very 40 stony 10		_	50
Hero, very stony 10		Halsey, very	40
Andover-Buchanan gravelly loams, 0 to 8 percent slopes, extremely stony- Andover, extremely stony Buchanan, 40 extremely stony Laidig 3 Hazleton 2 543243 Berks-Weikert complex, 25 to 60 percent slopes		_	10
extremely stony		į .	!
Buchanan, 40 extremely stony Laidig 3			
extremely stony			
Hazleton 2		•	•
543243 Berks-Weikert complex, 25 to 60 percent slopes		Laidig	
Berks-Weikert complex, 25 to 60 percent slopes		Hazleton 	2
Weikert 25 Bedington 4	The distriction of the CO second silver	 Parrier	
Bedington 4			
Comly 3 Brinkerton 2			
543246 Buchanan gravelly loam, 3 to 8 percent slopes		=] 3
Buchanan gravelly loam, 3 to 8 percent slopes		Brinkerton 	2
Andover 10 Wharton 10 Laidig 5 543247		 Buchanan	 75
Wharton 10 Laidig 5 5			•
Laidig 5 543247 Buchanan gravelly loam, 0 to 8 percent slopes, extremely stony Buchanan, 80 extremely stony Andover, 5 extremely stony Cookport 5 Laidig 5			•
Buchanan gravelly loam, 0 to 8 percent slopes, extremely stony			•
extremely stony Andover, 5 extremely stony Cookport 5 Laidig 5		 Buchanan .	l I 80
Andover, 5 extremely stony Cookport 5 Laidig 5		•	
Cookport 5 Laidig 5		Andover,	5
Laidig 5			
· · · · · · · · · · · · · · · · · · ·		_	
1		Murrill	5

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of map unit
543257		
Chippewa silt loam, 0 to 3 percent slopes	Chippewa	90
	Swartswood Wurtsboro	5 5
543258	 	
Chippewa silt loam, 3 to 8 percent slopes	Chippewa	90
	Swartswood	J 5
	Wurtsboro	5
543259		
Chippewa gravelly silt loam, 0 to 8 percent slopes, extremely stony		90
	extremely stony Swartswood	I I 5
	Wurtsboro	1 5
		i
543271 Delaware fine sandy loam, 0 to 3 percent slopes	 Delaware	l I 90
	Alton	5
	Conotton	2
	Hatboro	1
	Nanticoke	1
543276	<u>i_</u>	į
Fluvaquents	Fluvaquents	85
	Towhee Mount Lucas	5 1
	Nanticoke	1 1
	Neshaminy	. <u>. </u>
543292	 	!
Hazleton very channery loam, 8 to 25 percent slopes, extremely stony	Hazleton,	J 90
	extremely stony	
	Buchanan 	5
543293	 	l I 90
Hazleton very channery loam, 25 to 60 percent slopes, extremely stony	extremely stony	
	Buchanan	, J 5
F42000	į	į
543299 Laidig very gravelly loam, 0 to 8 percent slopes, extremely stony	∣ · Laidig,	I J 90
	extremely stony	I
	Andover	4
	Buchanan	4
	Hazleton 	2
543300 Laidig very gravelly loam, 8 to 25 percent slopes, extremely stony	 Taidig	l I 90
Laiding very graverry roam, o to 25 percent stopes, extremery stony	extremely stony	•
	Andover,	4
	extremely stony	I
	Buchanan	4
	Hazleton	2
543304	i	i
Laidig-Rubble land complex, 25 to 60 percent slopes	-	50
	Rubble land Andover	40 5
	Buchanan	1 5 1 5
	,	

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of map unit
543318 Rubble land	 - Rubble land	 75
Numble land	Hazleton	1 10
	Buchanan	,° , 5
	Clymer	5
	Laidig	5
543327		!
Swartswood gravelly loam, 3 to 8 percent slopes	- Swartswood	90
	Conotton	4
	Chippewa] 3
	Manlius	3
543328	i	i
Swartswood gravelly loam, 8 to 15 percent slopes	- Swartswood	90
	Conotton	4
	Chippewa] 3
	Manlius 	3
543330		į
Swartswood and Wurtsboro soils, 0 to 8 percent slopes, extremely stony-		50
	extremely stony	I I 30
	Wurtsboro, extremely stony	
	Conotton	4
	Manlius	1 4
	Chippewa,	j 3
	extremely stony	l I
543331	i	i .
Swartswood and Wurtsboro soils, 8 to 25 percent slopes, extremely stony-		50
	extremely stony	I I 30
	Wurtsboro, extremely stony	
	Conotton	 4
	Chippewa,	1 3
	extremely stony	į
543359	1	
Volusia gravelly silt loam, 3 to 8 percent slopes	- Volusia	85
	Chippewa	10
	Swartswood	5
543360	į	į
Volusia gravelly silt loam, 0 to 8 percent slopes, extremely stony		85
	extremely stony	 10
	Chippewa, extremely stony	•
	Swartswood	, J 5
		i
543374	 	
Wurtsboro gravelly silt loam, 3 to 8 percent slopes	- Wurtsboro	90
- · · · · · · · · · · · · · · · · · · ·	Chippewa	2
	Conotton	2
	Halsey	2
	Manlius Phelps	2 2

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of
543375 Wurtsboro gravelly silt loam, 8 to 15 percent slopes	 Wurtsboro Chippewa Conotton	 90 2 2
	Halsey Manlius Phelps 	2 2 2
612280 Scio silt loam, 0 to 3 percent slopes	 Scio Unadilla Aeric Endoaquepts, postglacial alluvium	 80 10 10 10
612666 Colonie loamy fine sand, 0 to 3 percent slopes	 Colonie Delaware Unadilla	 80 10 10
612668 Hoosic-Hazen complex, 8 to 15 percent slopes, very stony	 	 60 30
	Hazen, very stony Otisville, very stony Colonie, very	i
612724 Lordstown-Wallpack complex, 15 to 35 percent slopes, very rocky		 50
	rocky Wallpack, very rocky Chadakoin, very	 40 5
	rocky Rock outcrop	 5
612732 Atherton mucky silt loam, 0 to 3 percent slopes	 Atherton, very poorly drained Atherton,	 60 30
	poorly drained Aeric Endoaquepts, postglacial alluvium	•
612738 Fluvaquents, loamy, 0 to 3 percent slopes, occasionally flooded	 Fluvaquents, occasionally flooded	 90
	Udifluvents, occasionally flooded 	10

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit 	 Pct. of map unit
612753 Wallpack fine sandy loam, aeolian mantle, 8 to 15 percent slopes, very	 	
stony	Wallpack, aeolian mantle,	85
	very stony Lordstown, very stony	 10
	Aquic Dystrudepts, aeolian mantle,	5
612756	very stony 	
Wallpack fine sandy loam, aeolian mantle, 0 to 8 percent slopes, very stony	 Wallpack, aeolian mantle, very stony	 85
	Lordstown, very	10
	Aquic Dystrudepts, aeolian mantle, very stony	5
612757 Wallpack fine sandy loam, aeolian mantle, 15 to 35 percent slopes, very	 	
stony	aeolian mantle, very stony	I
	Lordstown, very stony	I
	Aquic Dystrudepts, aeolian mantle, very stony	5
612767 Wellsboro silt loam, 8 to 15 percent slopes, extremely stony	 Wellsboro, extremely stony	 85
	Morris, extremely stony	10
	Lackawanna, extremely stony	J 5
612768 Wellsboro silt loam, 0 to 8 percent slopes, extremely stony	 Wellsboro, extremely stony	 85
	Morris, extremely stony	
	Lackawanna, extremely stony 	5
613393 Alden silt loam, 0 to 8 percent slopes, extremely stony	 Alden, extremely stony	 90
	Chippewa, extremely stony	10
613447 Unadilla silt loam, 0 to 3 percent slopes		 85
	Delaware Colonie 	10 5

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit 	 Pct. of map unit
613448		
Unadilla silt loam, 3 to 8 percent slopes	Unadilla	85
	Delaware Colonie	10 5
614075	1	
Wurtsboro-Swartswood complex, 15 to 35 percent slopes, extremely stony		, 80
	extremely stony	I
	Swartswood,	20
	extremely stony	
620179	İ	į
Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky	_	55
	rocky Lordstown, very	I I 40
	rocky	1 -20
	Rock outcrop	5
	1	I
620180	1	!
Arnot-Lordstown-Rock outcrop complex, 15 to 35 percent slopes	Arnot	45
	Lordstown Rock outcrop	40 15
		13
620181	Ì	ĺ
Arnot-Lordstown-Rock outcrop complex, 35 to 60 percent slopes	Arnot	60
	Lordstown	25 15
	Rock outcrop	15
623089	i	i
Chippewa silt loam, 0 to 8 percent slopes, extremely stony		l 80
	extremely stony	
	Alden, extremely stony	10
	Venango,	1 10
	extremely stony	•
623109		
	 Farmington	50
	Rock outcrop	40
	Galway	10
624811	İ	i I
Galway loam, 35 to 60 percent slopes, very rocky	Galway, very	l 80
	rocky	10
	Farmington, very rocky	10
	Rock outcrop	, J 5
	Wallpack,	J 5
	aeolian mantle,	I
	very rocky	I
624813		'
Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes, extremely stony	Lackawanna,	85
	extremely stony	
	Wellsboro,	10
	extremely stony Oquaga,	I I 5
		•
	extremely stony	1

Table 1.--Soil Legend--Continued

		map unit
624816		1
	ordstown, very cocky	50
	llpack, very	35
Car	mbridge, very cocky	5
Cha	adakoin, very	5
	ocky ock outcrop	 5
624822		l
	ordstown illpack	50 35
	nadakoin	1 10
	mbridge	5
624823		I I 50
	ordstown illpack	I 35
	nadakoin	1 10
Car	mbridge	J 5
624824 Lordstown-Wallpack complex, 0 to 8 percent slopes Lor	ordstown	 50
	llpack	35
Cha	adakoin	10
1	mbridge] 5]
	nlius, very	 60
	ssau, very ocky	25
	ck outcrop	10
	illpack, very cocky	5
624827		!
	ssau, very cocky	55
	nlius, very cocky	44
	ock outcrop	1
624828 Nassau-Manlius complex, 8 to 15 percent slopes, very rocky	esan verv	 55
re	cocky	İ
re	nlius, very cocky	44
1	ock outcrop	1
624829 Nassau-Manlius complex, 15 to 35 percent slopes, very rocky Nas	· -	 55
Mar	cocky Inlius, very	44
	cocky ock outcrop	 1
624832 Nassau-Rock outcrop complex, 35 to 60 percent slopes Nas	ıssau	 50
	ock outcrop	1 45
IRoc		

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit 	Pct. of map unit
624841 Oquaga-Rock outcrop complex, 35 to 60 percent slopes	 Oquaga Rock outcrop Arnot Lackawanna	 60 25 10
624845 Rock outcrop-Farmington-Galway complex, 15 to 35 percent slopes	 Rock outcrop Farmington Galway	 45 35 20
624846 Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes	 Rock outcrop Arnot Rubble land Lordstown	 40 30 20 10
626816 Udifluvents, 0 to 3 percent slopes, occasionally flooded	 Udifluvents, occasionally flooded Fluvaquents, occasionally flooded	 90 10 10
635458 Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky	Trooded Oquaga, very rocky Lackawanna, very rocky Rock outcrop	 55 30 10
635459 Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky	Wellsboro, very rocky Oquaga, very rocky Lackawanna,	•
740953	very rocky Rock outcrop Wellsboro, very rocky	 10
Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded	 Delaware, rarely flooded Colonie Unadilla 	80 10 10
740968 Nassau-Manlius complex, 8 to 15 percent slopes, very rocky	 Nassau, very rocky Manlius, very rocky Rock outcrop	 55 44 1
	 Nassau, very rocky Manlius, very	 55 44
	rocky Rock outcrop	1

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit	Pct. of map unit
740971	 	
Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky	Oquaga, very rocky	55
	Lackawanna, very rocky	30
	Rock outcrop Wellsboro, very	10 5
	rocky	3
740972 Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky	 Oquaga, very	 50
	rocky Lackawanna,	I I 35
	very rocky Rock outcrop	 10
	Wellsboro, very	5
740074	rocky 	! !
740974 Oquaga-Rock outcrop complex, 35 to 60 percent slopes	 - Oquaga	l 60
	Rock outcrop Arnot	25 10
	Lackawanna	j 5
740975 Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes	 - Rock outcrop	 40
	Arnot	30
	Rubble land Lordstown	20
740987		I I 80
Scio silt loam, 0 to 3 percent slopes	- Scio Unadilla	10
	Aeric	10
	Endoaquepts, postglacial	
	alluvium 	
740988 Udifluvents, 0 to 3 percent slopes, occasionally flooded	 - Udifluvents,	l I 90
	occasionally flooded	1
	Fluvaquents,	1 10
	occasionally flooded	
740991	1	
Unadilla silt loam, 0 to 3 percent slopes		85
	Delaware Colonie	10 5
740000	!	1
740992 Unadilla silt loam, 3 to 8 percent slopes	 - Unadilla	l 85
	Delaware Colonie	10
740995	 	5
Wellsboro silt loam, 0 to 8 percent slopes, extremely stony	 Wellsboro,	l 85
	extremely stony Morris,	' 10
	extremely stony	•
	Lackawanna, extremely stony	5
	excremeth around	

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	 Components in map unit 	 Pct. of map unit
740996 Wellsboro silt loam, 8 to 15 percent slopes, extremely stony	extremely stony Morris, extremely stony Lackawanna,	10 5
	extremely stony Lackawanna, extremely stony Wellsboro,	 85 10
741150	extremely stony Oquaga, extremely stony 	J 5
Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes, extremely	 Lackawanna, extremely stony Wellsboro, extremely stony	10 I
801114 Oquaga-Rock outcrop complex, 0 to 15 percent slopes	Oquaga, extremely stony Oquaga Rock outcrop	5 75 15
810906	Arnot Wellsboro 	5 5
Oquaga-Rock outcrop complex, 0 to 15 percent slopes	Oquaga Rock outcrop Arnot Wellsboro 	75 15 5 5
1147465 Alden silt loam, 0 to 8 percent slopes, extremely stony	 Alden, extremely stony Chippewa, extremely stony	10
1147467 Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky	 Arnot, very rocky Lordstown, very	 55 40
1147468	rocky Rock outcrop 	 5
	Arnot Lordstown Rock outcrop 	45 40 15
Arnot-Lordstown-Rock outcrop complex, 35 to 60 percent slopes	 Arnot Lordstown Rock outcrop 	60 25 15

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	Components in map unit _	Pct. of map unit
1147470 Atherton mucky silt loam, 0 to 3 percent slopes	 Atherton, very	 60
Achercon macky sire round, 0 to 3 percent stopes	poorly drained Atherton,	•
	poorly drained	
	Aeric Endoaquepts, postglacial alluvium	10
1147471 Catden mucky peat, 0 to 2 percent slopes	 Catden	I I 85
outden mass, peas, v to 1 persons bropes	Alden	1 13
	Wallkill] 2
1147474	i	İ
Chippewa silt loam, 0 to 8 percent slopes, extremely stony	Chippewa, extremely stony	80
	Alden, extremely stony	10
	Venango, extremely stony	10
1147475	 Colonio	 80
Colonie loamy fine sand, 0 to 3 percent slopes	Colonie Delaware	1 10
	Unadilla	1 10
1147478 Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded	 Delaware, rarely flooded	 80
	Colonie Unadilla	10 10
1147482	1	
Fredon-Halsey complex, 0 to 3 percent slopes, very stony	Fredon, very stony	50
	Halsey, very stony	40
	Hero, very stony	10
1147485 Hazen-Hoosic complex, 3 to 8 percent slopes, very stony	 Hazen, very	l I 60
mazen noosic complex, 3 to 6 percent slopes, very stony	stony	į į
	Hoosic, very stony	35
	Otisville, very stony 	5
1147490 Hoosic-Hazen complex, 8 to 15 percent slopes, very stony		 60
	stony Hazen, very	 30
	stony Otisville, very stony	I 5
	Stony Colonie, very	5

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	 Components in map unit 	 Pct. of map unit
1147491 Henric-Otioville complex 25 to 60 percent alones were story	 	I I I 50
Hoosic-Otisville complex, 25 to 60 percent slopes, very stony	stony	l 30
	Otisville, very stony	40
	Hazen, very	10
1147492 Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes, extremely stony		 85
	extremely stony Wellsboro,	1 10
	extremely stony Oquaga,	J 5
1147500	extremely stony 	
	Wurtsboro,	j 90
	extremely stony Swartswood, extremely stony	10
1147501		İ
Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely stony		l 60
	extremely stony Swartswood,	 40
	extremely stony	
1147502 Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely stony	 Wurtsboro,	l I 60
	extremely stony Swartswood,	I I 40
	extremely stony	i I
1147527 Udorthents-Urban land complex, 0 to 8 percent slopes	 Udorthents	I I 60
	Urban land	1 40
1147532	 	
Udorthents, 0 to 8 percent slopes, smoothed	Udorthents 	100
1147533 Wurtsboro-Swartswood complex, 15 to 35 percent slopes, extremely stony	 Wurtsboro, extremely stony	 80
	Swartswood, extremely stony	20
1948749	 	
Arnot channery silt loam, 3 to 8 percent slopes	Arnot Bedington	90 5
	Wurtsboro	5 5
1948750 Arnot channery silt loam, 8 to 15 percent slopes	 Arnot	, 90
	Brinkerton	5
	Wurtsboro 	5
1948751 Arnot channery silt loam, 15 to 25 percent slopes	 Arnot	l 90
	Brinkerton Wurtsboro	5 5
	l	i

Table 1.--Soil Legend--Continued

Map unit symbol and map unit name	 Components in map unit 	 Pct. of map unit
1948774 Conotton gravelly loam, 3 to 8 percent slopes	 - Conotton	 90
1948775 Conotton gravelly loam, 8 to 15 percent slopes	 - Conotton	 95
1948776 Conotton gravelly loam, 15 to 25 percent slopes	 - Conotton	 95
1948777 Conotton gravelly loam, 25 to 65 percent slopes	 - Conotton	 95
1948797 Manlius channery silt loam, 3 to 8 percent slopes	 - Manlius	 90
	Arnot	2
	Conotton	2
	Loudonville	2
	Swartswood	2
	Wurtsboro 	2
1948802	126	1
Manlius channery silt loam, 8 to 15 percent slopes	- Manlius Arnot	90 2
	Conotton	1 2
	Loudonville	1 2
	Swartswood	1 2
	Wurtsboro	2
1948818	1	I
Manlius channery silt loam, 15 to 25 percent slopes	- Manlius	j 90
	Arnot	2
	Conotton	2
	Loudonville	2
	Swartswood	2
	Wurtsboro	2
1948832 Penargyl channery silt loam, 3 to 8 percent slopes	 - Penargy	 90
1948846 Phelps gravelly silt loam, 3 to 8 percent slopes		l 90
	Halsey	4
	Swartswood	4
	Wurtsboro 	2
1948855	1	<u>!</u> .
Udorthents, loamy	- Udorthents,	J 95
	loamy Bedington	1
	Clarksburg	1 1
	Duffield	1 1
	Lansdale	1 1
		•
	Readington	1
1948989	Readington 	1
1948989 Urban land-Delaware complex, 0 to 8 percent slopes	Readington - Urban land	

Table 2.--Land Capability Classification

[Land capability classification is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time]

Man unit combal and component name	Land
Map unit symbol and component name	capability
290836	1
Hoosic, very stony	7e
Otisville, very stony	 7s
296265	
Alden	4w
296269	i
Fluvents, (alluvial land)	8s
296271	i
Alvira	6s
Watson	6s
296272	İ
Bath	2e
296273	i
Bath	3e
296274	i
Bath	4e
296275	i
Bath	6s
296276	i
Bath	6s
296277	į
Benson	6s
296278	ĺ
Benson	6s
296279	<u> </u>
Benson	7s
296280	İ
Braceville	2w
296281	!
Braceville	2w
296283	<u> </u>
Buchanan	7s
296288	
Chippewa	4w
Norwich	4w
296289	i
Chippewa	7s
Norwich	7s
	I

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
296295 Udorthents, cut and fill.	
296297 Dekalb	 7s
296298 Dekalb	 7s
296303 Hazleton	 7s
296304 ноlly	 3w
296311 Lackawanna	 7s
Bath	 7s
296312 Lackawanna	 2e
296313 Lackawanna	 3e
296315 Lackawanna	 7s
296316 Lackawanna	 7s
296317 Laidig	 7s
296326 Lordstown	 7s
296327 Lordstown	 7s
296328 Lordstown	I I
Oquaga	İ
296329 Mardin	
296330 Mardin	 3e
296331 Mardin	 6s
296332 Mardin	 6s
296335 Meckesville	 3e
296337 Meckesville	 6s
	33

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
296338 Morris	 3w
296339 Morris	 7s
296340 Morris	 7s
296341 Freetown, mucky peat	 5w
296342 Paupack, mucky peat (shallow)	 5w
296343 Oquaga	 2e
Lackawanna	 2e
296344 Oquaga	 3e
Lackawanna	3e
296346 Oquaga	1
Lackawanna	i I
Oquaga	I
296348 Philo	
296349 Pope	 1
296350 Pope	, - 1
296351	i I
Rexford, somewhat poorly drained	1
296355 Sheffield	 3w
296363 Dystrochrepts, very stony	 7s
296369 Wayland	
296376 Wellsboro	 2w
296379 Wellsboro	
MGTTSDOLO	7s

Table 2.--Land Capability Classification--Continued

	I Tond
Map unit symbol and component name	Land capability
296385 Wyoming	 3s
296386 Wyoming	 3s
296387 Wyoming	 4s
296388 Wyoming	 4e
296389 Wyoming	 7e
297185 Edgemere	 7s
Shohola	 7s
297186 Edgemere	 7s
297188 Manlius	 7s
Arnot	l 7s
297189 Manlius	 7s
Arnot	 7s
297190 Braceville	 2w
297191 Wyalusing	
297192 Pope	 2w
297193 Paupack	 5w
297196 Freetown	 5w
297197 Manlius	 6s
297198 Manlius	 6s
297201 Oquaga	 6s
297203 Delaware	 1
297204 Delaware	 2e

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
297205 Delaware	 4e
297209 Philo	 2w
297210 Barbour	 1
297216 Wurtsboro	 6s
297217 Wurtsboro	 6s
297227 Arnot	i I
297228	
Arnot	7s
Wyoming	3s
297230 Wyoming	 4s
297231 Wyoming	 4e
297236 Suncook	 3s
297237 Mardin	 2w
297238 Mardin	 3e
297239 Mardin	 6s
297240 Mardin	 6s
297241 Unadilla	 1
297242 Shohola	 7s
Edgemere	 7s
297243 Shohola	 7s
Edgemere	 7s
297244 Lordstown	 7s
Swartswood	 7s

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
297247 Chenango	 2s
297248 Chenango	 3e
297249 Chenango	 4e
297253 Craigsville	 6s
Wyoming	 6s
298049 Wurtsboro, extremely stony	 7s
298050 Wurtsboro, extremely stony	 7s
Swartswood, extremely stony	 7s
298051 Wurtsboro, extremely stony	' 7s
Swartswood, extremely stony	 7s
298075 Colonie	 2s
298188 Lackawanna, extremely stony	 7s
298189 Lackawanna, extremely stony	 7s
298221 Swartswood, extremely stony	 7s
298222 Swartswood, extremely stony	 7s
298223 Swartswood, extremely stony	 7s
298255 Delaware, rarely flooded	 2e
298256 Delaware, rarely flooded	, 1
298257 Wallpack	 3e
298258 Wallpack	 4e
298259 Wallpack, extremely stony	 7s
298260 Wallpack, extremely stony	 7s

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
298261 Wallpack	 2e
298262 Wallpack, extremely stony	 7s
298265 Venango, extremely stony	 6s
298266 Venango, extremely stony	 6s
298409 Swartswood, extremely stony	 7s
298411 Swartswood, extremely stony	
298413 Swartswood, extremely stony	
318498 Hazen, very stony	
Hoosic, very stony	I
318533 Hazen, very stony	
Hoosic, very stony	 3s
319783 Catden	 5w
319784 Fredon, very stony	 3w
Halsey, very stony 543222	 5w
Andover, extremely stony	I
Buchanan, extremely stony543243	7s
Berks	İ
543246 Buchanan	 2e
543247 Buchanan, extremely stony	i I
543257 Chippewa	
543258	
Chippewa543259	4w
Chippewa, extremely stony	7s

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
543271 Delaware	 1
543276 Fluvaquents	 5w
543292 Hazleton, extremely stony	 7s
543293 Hazleton, extremely stony	 7s
543299 Laidig, extremely stony	 7s
543300 Laidig, extremely stony	
543304 Laidig	 7s
543327 Swartswood	 2e
543328 Swartswood	i I
543330 Swartswood, extremely stony	
Wurtsboro, extremely stony	1
543331 Swartswood, extremely stony	 7s
Wurtsboro, extremely stony	 7s
543359 Volusia	 3w
543360 Volusia, extremely stony	, 7s
543374 Wurtsboro	 2w
543375 Wurtsboro	 3e
612280 Scio	 2w
612666 Colonie	 2s
612668 Hoosic, very stony	 3e
Hazen, very stony	1
612724 Lordstown, very rocky	 7s
Wallpack, very rocky	 7s

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
612732 Atherton, very poorly drained	 3w
Atherton, poorly drained	 3w
612738 Fluvaquents, occasionally flooded	 3w
612753 Wallpack, aeolian mantle, very stony	 3e
612756 Wallpack, aeolian mantle, very stony	 2e
612757 Wallpack, aeolian mantle, very stony	 6e
612767 Wellsboro, extremely stony	 7s
612768 Wellsboro, extremely stony	 7s
613393 Alden, extremely stony	 7s
613447 Unadilla	 1
613448 Unadilla	 2e
614075 Wurtsboro, extremely stony	 7s
Swartswood, extremely stony	 7s
620179 Arnot, very rocky	 7s
Lordstown, very rocky	 7s
620180 Arnot	 7s
Lordstown	7s
620181 Arnot	 7s
Lordstown	 7s
623089 Chippewa, extremely stony	 7s
623109 Farmington	 7s
624811 Galway, very rocky	 7s
624813 Lackawanna, extremely stony	 7s

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
624816 Lordstown, very rocky	 6s
Wallpack, very rocky	 6s
624822 Lordstown	 4e
Wallpack	 4e
624823 Lordstown	 3e
Wallpack	 3e
624824 Lordstown	 2e
Wallpack	 2e
624826 Manlius, very rocky	 7s
Nassau, very rocky	l 7s
624827 Nassau, very rocky	 7s
Manlius, very rocky	 6s
624828 Nassau, very rocky	 7s
Manlius, very rocky	 6s
624829 Nassau, very rocky	 7s
Manlius, very rocky	 7s
624832 Nassau	1 7e
624841 Oquaga	 7e
624845 Farmington	 7s
Galway	l 7s
624846 Arnot	 7s
626816 Udifluvents, occasionally flooded	
635458 Oquaga, very rocky	 6s
Lackawanna, very rocky	 7s

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
635459 Oquaga, very rocky	 7s
Lackawanna, very rocky	1
740953 Delaware, rarely flooded	
740968 Nassau, very rocky	 7s
Manlius, very rocky	1
740969 Nassau, very rocky	 7s
Manlius, very rocky	 7s
740971 Oquaga, very rocky	 6s
Lackawanna, very rocky	1
740972 Oquaga, very rocky	
Lackawanna, very rocky	 7s
740974 Oquaga	 7e
740975 Arnot	 7s
740987 Scio	 2w
740988 Udifluvents, occasionally flooded	 2w
740991 Unadilla	
740992 Unadilla	 2e
740995 Wellsboro, extremely stony	 7s
740996 Wellsboro, extremely stony	 7s
741149 Lackawanna, extremely stony	 7s
741150 Lackawanna, extremely stony	 7s
801114 Oquaga	 3e
810906 Oquaga	 3e

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
1147465 Alden, extremely stony	
1147467	
Arnot, very rocky	1
Lordstown, very rocky	7s
1147468 Arnot	 7s
Lordstown	7s !
1147469 Arnot	, 7s
Lordstown	 7s
1147470 Atherton, very poorly drained	 3w
Atherton, poorly drained	 3w
1147471 Catden	 5w
1147474 Chippewa, extremely stony	 7s
1147475 Colonie	 2s
1147478 Delaware, rarely flooded	 2e
1147482 Fredon, very stony	
Halsey, very stony	 5w
1147485 Hazen, very stony	 2e
Hoosic, very stony	 3s
1147490 Hoosic, very stony	 3e
Hazen, very stony	1
1147491 Hoosic, very stony	 7e
Otisville, very stony	1
1147492	
Lackawanna, extremely stony	7s
1147500 Wurtsboro, extremely stony	 7s
1147501 Wurtsboro, extremely stony	 7s
Swartswood, extremely stony	 7s

Table 2.--Land Capability Classification--Continued

Map unit symbol and component name	Land capability
1147502 Wurtsboro, extremely stony	 7s
Swartswood, extremely stony	 7s
1147527 Udorthents	 3w
1147532 Udorthents	 3w
1147533 Wurtsboro, extremely stony	 7s
Swartswood, extremely stony	 7s
1948749 Arnot	 3s
1948750 Arnot	 4e
1948751 Arnot	 6e
1948774 Conotton	 2e
1948775 Conotton	 3e
1948776 Conotton	 6e
1948777 Conotton	1 7e
1948797 Manlius	 2s
1948802 Manlius	' 3e
1948818 Manlius	 4e
1948832 Penargyl	 2e
1948846 Phelps	 2e
1948855 Udorthents, loamy	 7s
1948989 Delaware	 2e
	i

Table 3.--Prime Farmland and Other Important Farmland

[Only the soils considered prime or important farmland are listed. Urban or built-up areas of the soils listed are not considered prime or important farmland]

Map		I
unit	·	Farmland classification
symbol		
		
006000		
	Bath channery silt loam, 3 to 8 percent slopes	
296273	Bath channery silt loam, 8 to 15 percent slopes	Farmland of statewide importance
	Braceville gravelly loam, 0 to 3 percent slopes	
	Braceville gravelly loam, 3 to 8 percent slopes	-
	Lackawanna channery loam, 2 to 8 percent slopes	
	Lackawanna channery loam, 8 to 15 percent slopes	
	Mardin channery silt loam, 2 to 8 percent slopes Mardin channery silt loam, 8 to 15 percent slopes	-
	Meckesville gravelly loam, 8 to 15 percent slopes	
	Morris channery silt loam, 2 to 10 percent slopes	
	Oquaga-Lackawanna channery loams, 3 to 8 percent slopes	
	Oquaga-Lackawanna channery loams, 8 to 15 percent slopes	
	Philo silt loam	
	Pope silt loam	
	Pope silt loam, high bottom	
	Rexford gravelly silt loam, 0 to 3 percent slopes	
296355	Sheffield silt loam	Farmland of statewide importance
296376	Wellsboro channery loam, 3 to 8 percent slopes	All areas are prime farmland
	Wyoming gravelly sandy loam, 0 to 3 percent slopes	
	Wyoming gravelly sandy loam, 3 to 8 percent slopes	
	Wyoming gravelly sandy loam, 8 to 15 percent slopes	
	Braceville fine sandy loam	
	Pope fine sandy loam	
	Delaware fine sandy loam, 0 to 3 percent slopes	
	Delaware fine sandy loam, 3 to 8 percent slopes Philo loam	
	Philo loam Barbour fine sandy loam	
	Wyoming very cobbly sandy loam, 3 to 8 percent slopes Suncook loamy sand, 0 to 8 percent slopes	
	Mardin channery silt loam, 0 to 8 percent slopes, stony	
	Mardin channery silt loam, 8 to 15 percent slopes, stony	
	Unadilla silt loam	
	Chenango gravelly fine sandy loam, 0 to 8 percent slopes	·
	Chenango gravelly fine sandy loam, 8 to 15 percent slopes	=
	Colonie loamy fine sand, 3 to 8 percent slopes	-
	Delaware fine sandy loam, 3 to 8 percent slopes, rarely	<u>-</u>
	flooded	All areas are prime farmland
	Delaware fine sandy loam, 0 to 3 percent slopes, rarely	l
	flooded	All areas are prime farmland
	Wallpack silt loam, 8 to 15 percent slopes	
	Wallpack silt loam, 3 to 8 percent slopes	-
	Hazen-Hoosic complex, 3 to 8 percent slopes, very stony	-
	Hazen-Hoosic complex, 0 to 3 percent slopes, very stony	-
	Catden mucky peat, 0 to 2 percent slopes	
	Buchanan gravelly loam, 3 to 8 percent slopes	·
	Delaware fine sandy loam, 0 to 3 percent slopes	-
	Swartswood gravelly loam, 3 to 8 percent slopes Swartswood gravelly loam, 8 to 15 percent slopes	-
	Volusia gravelly silt loam, 3 to 8 percent slopes	
	Wurtsboro gravelly silt loam, 3 to 8 percent slopes	·
	Wurtsboro gravelly silt loam, 8 to 15 percent slopes	-
	Scio silt loam, 0 to 3 percent slopes	
	Colonie loamy fine sand, 0 to 3 percent slopes	-
	Hoosic-Hazen complex, 8 to 15 percent slopes, very stony	
	Wallpack fine sandy loam, aeolian mantle, 8 to 15 percent	·
	slopes, very stony	
612756	Wallpack fine sandy loam, aeolian mantle, 0 to 8 percent	- I
	slopes, very stony	All areas are prime farmland
		I

Table 3.--Prime Farmland and Other Important Farmland--Continued

Map		<u> </u>
unit	•	' Farmland classification
symbol	•	
0,00	· 	'
	' ' 	'
613447	Unadilla silt loam, 0 to 3 percent slopes	All areas are prime farmland
613448	Unadilla silt loam, 3 to 8 percent slopes	Farmland of statewide importance
624823	Lordstown-Wallpack complex, 8 to 15 percent slopes	Farmland of statewide importance
	Lordstown-Wallpack complex, 0 to 8 percent slopes	
740953	Delaware fine sandy loam, 0 to 3 percent slopes, rarely	l
	flooded	All areas are prime farmland
740987	Scio silt loam, 0 to 3 percent slopes	All areas are prime farmland
740991	Unadilla silt loam, 0 to 3 percent slopes	All areas are prime farmland
	Unadilla silt loam, 3 to 8 percent slopes	
	Catden mucky peat, 0 to 2 percent slopes	
	Colonie loamy fine sand, 0 to 3 percent slopes	Farmland of statewide importance
	Delaware fine sandy loam, 3 to 8 percent slopes, rarely	
	flooded	•
	Hazen-Hoosic complex, 3 to 8 percent slopes, very stony	•
	Hoosic-Hazen complex, 8 to 15 percent slopes, very stony	·
	Arnot channery silt loam, 3 to 8 percent slopes	
	Conotton gravelly loam, 3 to 8 percent slopes	
	Conotton gravelly loam, 8 to 15 percent slopes	
	Manlius channery silt loam, 3 to 8 percent slopes	
	Manlius channery silt loam, 8 to 15 percent slopes	·
	Penargyl channery silt loam, 3 to 8 percent slopes	·
1948846	Phelps gravelly silt loam, 3 to 8 percent slopes	All areas are prime farmland
		<u> </u>

Table 4.--Hydric Soils

[This report lists only those map unit components that are rated as hydric. Definitions of hydric criteria codes are included at the bottom of the table]

Map unit symbol and]	 Percent		Hydric soils criteria			
map unit name	Component 	of map unit	Landform	Hydric criteria code 	Meets saturation criteria 	flooding	
296265 Alden mucky silt loam	 Alden 	 100 	 Depressions on till plains	 2B3, 3 	 Yes 	 No 	 Yes
296269 Alluvial land	 Holly 	 20 	 Depressions on flood plains, backswamps	 2B3 	 Yes 	 No 	 No
296271 Alvira and Watson very stony loams, 0 to 12 percent slopes	 Shelmadine 	 10 10	 Depressions 	 	 Yes 	 No 	 No
296280 Braceville gravelly loam, 0 to 3 percent slopes	 Rexford, poorly drained	 10 	 Depressions 	 	 Yes 	 No 	 No
296281 Braceville gravelly loam, 3 to 8 percent slopes	 Rexford, poorly drained	 5 	 Depressions 	 2B3 	 Yes 	 No 	 No
296283 Buchanan extremely stony loam, 0 to 8 percent slopes	 Shelmadine 	 5 	 Depressions 	 2B3 	 Yes 	 No 	 No
296288 Chippewa and Norwich silt loams, 0 to 5 percent slopes	 Chippewa Norwich 		 Depressions Depressions 	 2B3 2B3 	 Yes Yes 	 No No 	 No No No
296289 Chippewa and Norwich extremely stony soils, 0 to 8 percent slopes	 Chippewa Norwich 		 Depressions Depressions 	 2B3 2B3 	 Yes Yes 	 No No 	 No No No
296304 Holly silt loam	 Holly 	 100 	 Depressions on flood plains, backswamps	 2B3 	 Yes 	 No 	 No
296329 Mardin channery silt loam, 2 to 8 percent slopes	 Chippewa 	 3 	 Depressions 	 2B3 	 Yes 	 No 	 No
296330 Mardin channery silt loam, 8 to 15 percent slopes	 Chippewa 	 2 1	 Depressions 	 	 Yes 	 No 	 No

Table 4.--Hydric Soils--Continued

Man unit aumbal and		 		l Hy	dric soils	criteria	
Map unit symbol and map unit name	Component 	Percent of map unit 	Landform		Meets saturation criteria 	flooding	
296331 Mardin very stony silt loam, 0 to 8 percent slopes	rdin very stony silt Chippewa oam, 0 to 8 percent		 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
296332 Mardin very stony silt loam, 8 to 25 percent slopes		 1 	 Depressions 	 3, 2B3 	 Yes 	 No 	 Yes
296338 Morris channery silt loam, 2 to 10 percent slopes	 Norwich 	 20 	 Depressions 	 2B3 	 Yes 	 No 	 No
296339 Morris extremely stony silt loam, 0 to 8 percent slopes	 Norwich 	 25 	 Depressions 	 2B3 	 Yes 	 No 	 No
296340 Morris extremely stony silt loam, 8 to 20 percent slopes	 Norwich 	 20 	 Depressions 	 	 Yes 	 No 	 No
296341 Mucky peat, deep	 	 100 	 Swamps 	 3,1 	 No 	 No 	 Yes
296342 Mucky peat, shallow	 Paupack, mucky peat (shallow)	 100 	 Swamps 	 1 1	 No 	 No 	 No
296348 Philo silt loam	 Holly 		 Depressions on flood plains, backswamps	 2B3 	 Yes 	 No 	 No
296349 Pope silt loam	 Holly 		 Depressions on flood plains, backswamps	 2B3 	Yes Yes	 No 	 No
296350 Pope silt loam, high bottom	 Holly 		 Depressions on flood plains, backswamps	 2B3 	 Yes 	 No 	 No
296351 Rexford gravelly silt loam, 0 to 3 percent slopes	 Rexford, poorly drained	 35 	 Depressions 	 2B3 	 Yes 	 No 	 No
296355 Sheffield silt loam	 Sheffield 		 Depressions on till plains 	 	 Yes 	 No 	 No
296369 Wayland silty clay loam	 Wayland 	 100 	 Flood plains 	 4, 3, 2B3 	 Yes 	 Yes 	 Yes

Table 4.--Hydric Soils--Continued

Map unit symbol and	1	 Percent	 	Hy	dric soils	criteria	
map unit name	Component 	of map unit 	Landform	Hydric criteria code	Meets saturation criteria 	flooding	
296376 Wellsboro channery loam, 3 to 8 percent slopes	 Norwich 	 8 1	 Depressions 	2B3	 Yes 	 No 	 No
296379 Wellsboro extremely stony loam, 8 to 25 percent slopes	 Norwich 	 3 	 Depressions 	2B3	 Yes 	 No 	 No
297185 Edgemere-Shohola complex, 3 to 15 percent slopes, very rubbly	 Edgemere Freetown 		 Depressions Swamps 	3, 2B3 1, 3	 Yes No 	 No No No	 Yes Yes
297186 Edgemere extremely stony loam, 0 to 3 percent slopes, very rubbly	 Edgemere Freetown Wyalusing	4	 Depressions Swamps Flood plains	3, 2B3 3, 1 4, 2B2	 Yes No Yes	 No No Yes 	 Yes Yes No
297190 Braceville fine sandy loam	 Rexford, poorly drained	 3 	 Outwash terraces 	2B3	 Yes 	 No 	 No
297191 Wyalusing fine sandy loam	 Wyalusing 	 85 	 Flood plains 	 4, 2B2 	 Yes 	 Yes 	 No
297192 Pope fine sandy loam	 Wyalusing 	 5	 Flood plains 	2B2, 4	 Yes	 Yes 	 No
297193 Paupack mucky peat	 Paupack Edgemere Kimbles	8	 Swamps Depressions Depressions	1 2B3, 3 2B3	No Yes Yes	 No No No	 No Yes No
297196 Freetown mucky peat	 Freetown Gleneyre		 Swamps Relict lakebeds	3, 1 4, 3, 2B3	 No Yes	 No Yes	 Yes Yes
297197 Manlius very channery silt loam, 3 to 8 percent slopes, very bouldery	 Edgemere 	 3 	 	3, 2B3	 Yes 	 No 	 Yes
297198 Manlius very channery silt loam, 8 to 15 percent slopes, very bouldery	 Edgemere 	 2 1	 Depressions 	3, 2B3	 Yes 	 No No 	 Yes
297209 Philo loam	 Wyalusing 	 2	 Flood plains 	 2B2, 4	 Yes 	 Yes 	 No

Table 4.--Hydric Soils--Continued

Map unit symbol and	<u> </u>	 Percent	 	I Ну	dric soils	criteria	
map unit name	Component 	of map unit	Landform	Hydric criteria code 	Meets saturation criteria 	flooding	ponding
297216 Wurtsboro stony fine sandy loam, 0 to 8 percent slopes, extremely stony	 Edgemere 	 3 1	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
297217 Wurtsboro stony fine sandy loam, 8 to 15 percent slopes, extremely stony	 Edgemere 	1 1	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
297236 Suncook loamy sand, 0 to 8 percent slopes	 Wyalusing 	4	 Flood plains 	 4, 2B2 	 Yes 	 Yes 	 No
297237 Mardin channery silt loam, 0 to 8 percent slopes, stony	 Edgemere 	 3 	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
297238 Mardin channery silt loam, 8 to 15 percent slopes, stony	 Edgemere 	 3 	 Depressions 	 3,2B3 	 Yes 	 No 	 Yes
297239 Mardin stony loam, 0 to 8 percent slopes, extremely stony	 Edgemere 	 3 	 Depressions 	 3, 2B3 	 Yes 	 No 	 Yes
297240 Mardin stony loam, 8 to 15 percent slopes, extremely stony	 Edgemere 	 3 	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
297242 Shohola-Edgemere complex, 0 to 8 percent slopes, very rubbly	 Edgemere 	 29 	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
297243 Shohola-Edgemere complex, 8 to 15 percent slopes, very rubbly	 Edgemere 	 29 	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
297253 Craigsville-Wyoming complex, 0 to 8 percent slopes, extremely stony	 Wyalusing 	 6 	 Flood plains 	 4, 2B2 	 Yes 	 Yes 	 No
298265 Venango silt loam, 0 to 8 percent slopes, extremely stony	 Chippewa, extremely stony	 10 	 Interdrumlins 	 2B3 	 Yes 	 No 	 No

Table 4.--Hydric Soils--Continued

Map unit symbol and	1	 Percent	 	Ну	dric soils	criteria	
map unit name	Component -	of map unit	Landform	Hydric criteria code	Meets saturation criteria 	flooding	_
319783 Catden mucky peat, 0 to 2 percent slopes	 Catden Alden Wallkill	13	 Depressions Depressions Flood plains	 1, 3 2B3, 3 3, 2B3	No Yes Yes	 No No No	 Yes Yes Yes
319784 Fredon-Halsey complex, 0 to 3 percent slopes, very stony	 Halsey, very stony 	 40 	 Drainageways 	 2B3 	 Yes 	 No 	 No
543222 Andover-Buchanan gravelly loams, 0 to 8 percent slopes, extremely stony	 Andover, extremely stony 	 55 	 Sandstone and shale hillslopes 	 2B3 	 Yes 	 No 	 No
543243 Berks-Weikert complex, 25 to 60 percent slopes	 Brinkerton 	 2 	 Depressions 	 2B3 	 Yes 	 No 	 No
543246 Buchanan gravelly loam, 3 to 8 percent slopes	 Andover 	 10 	 Depressions 	 2B3 	 Yes 	 No 	 No
543247 Buchanan gravelly loam, 0 to 8 percent slopes, extremely stony	 Andover, extremely stony	 5 5 	 Depressions 	 2B3 	 Yes 	 No No 	 No No
543257 Chippewa silt loam, 0 to 3 percent slopes	 Chippewa 	 90 	 Depressions 	 2B3 	 Yes 	 No 	 No
543258 Chippewa silt loam, 3 to 8 percent slopes	 Chippewa 	 90 	 Depressions 	 2B3 	 Yes 	 No 	 No
543259 Chippewa gravelly silt loam, 0 to 8 percent slopes, extremely stony	 Chippewa, extremely stony	 90 	 Depressions 	 2B3 	 Yes 	 No 	 No
543271 Delaware fine sandy loam, 0 to 3 percent slopes	 Hatboro Nanticoke 		 Flood plains Tidal flats 	 2B3 3, 2B3	 Yes Yes 	 No No No	 No Yes
543276 Fluvaquents	 Fluvaquents Towhee 	5 	 Flood plains Depressions, mountain	 2B3 2B3	 Yes Yes 	 No No 	 No No No
	 Nanticoke 		valleys Tidal flats 	 2B3, 3 	 Yes 	 No 	 Yes

Table 4.--Hydric Soils--Continued

Map unit symbol and	1	 Percent	 	l Hy	dric soils	criteria	
map unit name	Component 	of map unit 	Landform	Hydric criteria code	Meets saturation criteria 	flooding	
543299 Laidig very gravelly loam, 0 to 8 percent slopes, extremely stony	 Andover 	 4 	 Sandstone and shale hillslopes 	 2B3 	 Yes 	 No No 	 No No
543300 Laidig very gravelly loam, 8 to 25 percent slopes, extremely stony	 Andover, extremely stony	mely shale		 2B3 	 Yes 	 No 	 No
543304 Laidig-Rubble land complex, 25 to 60 percent slopes	 Andover 	 5 	 Sandstone and shale hillslopes	 2B3 	 Yes 	 No 	 No
543327 Swartswood gravelly loam, 3 to 8 percent slopes	 Chippewa 	 3 	 Depressions 	 2B3 	 Yes 	 No 	 No
543328 Swartswood gravelly loam, 8 to 15 percent slopes	 Chippewa 	 3 	 Depressions 	 2B3 	 Yes 	 No 	 No
543330 Swartswood and Wurtsboro soils, 0 to 8 percent slopes, extremely stony	 Chippewa, extremely stony	 3 	 Depressions 	 2B3 	 Yes 	 No 	 No
543331 Swartswood and Wurtsboro soils, 8 to 25 percent slopes, extremely stony	 Chippewa, extremely stony	 3 	 Depressions 	 2B3 	 Yes 	 No 	 No
543359 Volusia gravelly silt loam, 3 to 8 percent slopes	 Chippewa 	 10 1	 Depressions 	 2B3 	 Yes 	 No 	 No
543360 Volusia gravelly silt loam, 0 to 8 percent slopes, extremely stony	 Chippewa, extremely stony	 10 	 Depressions 	 2B3 	 Yes 	 No 	 No
543374 Wurtsboro gravelly silt loam, 3 to 8 percent slopes	 Chippewa Halsey 		 Depressions Flood plains 	 2B3 2B3 	 Yes Yes 	 No No No	 No No No
543375 Wurtsboro gravelly silt loam, 8 to 15 percent slopes	 Chippewa Halsey 		 Depressions Flood plains 	 2B3 2B3 	 Yes Yes 	 No No 	 No No

Table 4.--Hydric Soils--Continued

Map unit symbol and	1	Percent	 	Ну	dric soils	criteria	
map unit name		of map unit	Landform	Hydric criteria code	Meets saturation criteria 	_	ponding
612732 Atherton mucky silt loam, 0 to 3 percent slopes		 	 Depressions Depressions 	 3, 2B3 2B3, 3	 Yes Yes	 No No	 Yes Yes
612738 Fluvaquents, loamy, 0 to 3 percent slopes, occasionally flooded	drained Fluvaquents, occasionally flooded		 Flood plains 	 2B3 	 Yes 	 No 	 No
613393 Alden silt loam, 0 to 8 percent slopes, extremely stony	 Alden, extremely stony	 	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
	Chippewa, extremely stony	10 	Depressions -	2B3 	Yes 	No 	No
623089 Chippewa silt loam, 0 to 8 percent slopes, extremely stony	 Chippewa, extremely stony		 Interdrumlins 	 2B3 	 Yes 	 No 	 No
	Alden, extremely stony	10 	Interdrumlins 	3, 2B3 	Yes 	No 	Yes
626816 Udifluvents, 0 to 3 percent slopes,	 Fluvaquents, occasionally		 Flood plains 	 2B3	 Yes 	 No 	 No
occasionally flooded	flooded Fluvaquents, occasionally flooded		 Flood plains 	2B3 	 Yes 	No No 	
1147465 Alden silt loam, 0 to 8 percent slopes,	 Alden, extremely stony	90	 Depressions 	 2B3, 3 	 Yes 	 No 	 Yes
extremely stony	Chippewa, extremely stony	10	 Depressions 	2B3 	 Yes 	No No 	No
1147470 Atherton mucky silt loam, 0 to 3 percent slopes	 Atherton, very poorly drained	60	 Depressions 	 3, 2B3 	 Yes 	 No 	 Yes
•	Atherton, poorly drained	30 	 Depressions 	2B3, 3 	Yes 	No 	Yes
1147471 Catden mucky peat, 0 to 2 percent slopes	 Catden Alden Wallkill	13	 Depressions Depressions Flood plains	3, 1 3, 2B3 2B3, 3	No Yes Yes	No No No	Yes Yes Yes

Table 4.--Hydric Soils--Continued

	1	1	I	Hy	dric soils	criteria	
Map unit symbol and	1	Percent	I	l			
map unit name	Component	of map	Landform	Hydric	Meets	Meets	Meets
	1	unit	I	criteria	saturation	flooding	ponding
	1	1	 	l code	criteria	criteria 	criteria
1147474	İ	i	'	' 	:	<u>'</u>	;
Chippewa silt loam, 0	Chippewa,	1 80	 Interdrumlins	ı I 2В3	Yes	l No	l No
to 8 percent slopes,	extremely	i	İ	İ	i	İ	i
extremely stony	stony	i	İ	İ	i	i	İ
	Alden,	10	Interdrumlins	2B3, 3	Yes	No	Yes
	extremely	I	I	l	1	I	I
	stony	1	l	l	I	I	I
	1	1		l	1	I	l
1147482	1	!	!	!	1	1	
Fredon-Halsey complex,		40	Drainageways	2B3	Yes	l No	l No
0 to 3 percent	stony	!	!	! :	1	!	!
slopes, very stony	1	!	 	! !	1	1	!
1948846			! 	! 	! 	! 	'
Phelps gravelly silt	 Halsey	4	 Flood plains	2B3	Yes	No	No
loam, 3 to 8 percent	Ī	İ	i -	İ	İ	İ	İ
slopes	1	I	I	I	I	I	I
	1	I	I	I	1	I	I

Explanation of hydric criteria codes:

- 1. All Histels except for Folistels and Histosols except for Folists.
- 2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
 - B. are poorly drained or very poorly drained and have either:
 - a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
 - 2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
 - 3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
- 3. Soils that are frequently ponded for periods of long or very long duration during the growing
- Soils that are frequently flooded for periods of long or very long duration during the growing season.

Table 5.--Landscape, Landform, and Parent Material

[Only major components are displayed in the table. Miscellaneous nonsoil components may not be included. Components may not add up to 100 percent. MAP is the mean annual precipitation]

	Percent		Elevation	l IMAD	 Landscape	 Landform	Parent
and soil name	OI Map unit 	_	Elevation	MAP 	Landscape 	Landiorm 	material
<u> </u>	Pct	Pct	Ft	In	i	İ	Ī
290836 Hoosic, very stony-	 50 	 25-60 	400-801		 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
Otisville, very stony	•	 25-60 	400-801		 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
296265 Alden	 100 	 0-3 	299-1499	 30-45 	· -	 Depression on till plain	 Till Till
296269 Fluvents,				 		 	
(alluvial land)	70 	0-3 	200-1001	35-45 	River valley 	Flood plain 	Alluvium
296271 Alvira	 55 	 0-12 	 	 36-56 	· -	 Glaciated hillslope	 Till
Watson	 35 	 0-12 		 34-51 	 Uplands 	 Valley side 	 Old till derived from sedimentary rock
296272 Bath	 85 	 	801-1801	 30-40 	 Uplands 	 Glaciated mountain	
296273 Bath	 85 	 	801-1801	 30-40 	 Uplands 	 Glaciated mountain	
296274 Bath	 85 	 15-25 	801-1801	 30-40 		 Glaciated mountain	
296275 Bath	90 	 3-8 	801-1801	 30-40 	 Uplands 	 Glaciated mountain 	 Loamy till derived mainly from gray and brown siltstone, sandstone, and shale
296276 Bath	 90 	 	801-1801	 30-40 	 Uplands 	 Glaciated mountain 	 Loamy till derived mainly from gray and brown siltstone, sandstone, and shale
296277 Benson	 55 	 	89-1001		 Glaciated upland 	 Hillslope 	 Loamy till
296278 Benson	 60 	 8-25 	89-1001		 Glaciated upland	 Hillslope 	 - Loamy till -
Rock outcrop	 20 	, 	 	 34-51 	' 	' 	

Table 5.--Landscape, Landform, and Parent Material--Continued

	I.Danier					1	
Map unit symbol and soil name	Percent of map unit	Slope	Elevation	I MAP 	 Landscape 	 Landform 	 Parent material
	Pct	Pct	Ft	 In	¦	¦	<u> </u>
296279 Benson	 60 	 25-70 	89-1001		 Glaciated upland	 Hillslope 	 Loamy till
Rock outcrop	 25 	 	 	 34-51 	 	 	
296280 Braceville	 90	 0-3		 36-56	 Upland	 Outwash terrace	 Coarse-loamy outwash
296281 Braceville	 90	 3-8		 36-56	 Uplands	 Outwash terrace	 Coarse-loamy outwash
296283 Buchanan	 90 	 0-8 0	600-2402	 38-46 	_	Ī	 Mountain slope colluvium derived from sedimentary rock
296288 Chippewa	 48	 0-5	801-1801	 30-45	 Uplands	 Depression	 Till
Norwich	I 48 	I 0-5 	49-499	I 33-45 	 Uplands 	 Depression 	 Till
296289 Chippewa	 47	 0-8	801-1801	 30-45	 Uplands	 Depression	 - Till
Norwich	 47	 0-8	 	 34-51 	 Uplands 	 Depression 	 Till
296295 Udorthents, cut and fill	 90 	 0-25 		 34-51 	 	•	 - Manmade and altered materials from mixed rock types
296297 Dekalb	100 	 8-25 	1001-2799	 36-60 	 Mountains 	 Mountain I	 Residuum weathered from sandstone and shale
296298 Dekalb	 100 	 25-80 	1001-2799	 36-60 	 Mountains 	 Mountain 	 Residuum weathered from sandstone and shale
296303 Hazleton	 100 	 8-25 	1099-2500	 36-55 	 Mountains 	•	 Residuum weathered from sandstone
296304 Holly	 100 	 0-3 0	801-840	 30-40 	Ī	_	 - Loamy alluvium derived from sandstone and shale
296311 Lackawanna	 40 	 25-70 	1099-1801	 32-50 	I	 Glaciated hillslope Ridge	 Till
Bath	 30 	 25-70 	801-1801	 30-40 	 Uplands 	 Glaciated mountain 	 Till

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent			Ī .	!	<u> </u>	<u> </u>
Map unit symbol and soil name	of map unit		Elevation	MAP 	Landscape 	Landform 	Parent material
	!	!!		!	!	!	<u> </u>
296312	Pct 	Pct 	Ft	In	 	 	
Lackawanna	 80 	3-8 3-8 	1099-1801	 32-50 	I	Glaciated hillslope Ridge	 Till
296313 Lackawanna	 80 	 	1099-1801	 32-50 	l _	 Glaciated hillslope Ridge	
296315 Lackawanna	 80 	 3-8 	1099-1801	 32-50 	l _	 - Glaciated hillslope Ridge -	 Till Till
296316 Lackawanna	 80 	 8-25 	1099-1801	 32-50 	İ	 Glaciated hillslope Ridge 	 Till
296317 Laidig	100 		400-3799	34-40 	 	 Mountain 	 Colluvium derived from sandstone and siltstone
296326 Lordstown	 85 	 3-8 	751-1801	 32-50 	 Plateau 	 Hill 	 Till
296327 Lordstown	 85 	 8-25 	751-1801	 32-50 	 Plateau 	 Hill 	 Till
296328 Lordstown	 40	 25-70	751-1801	 32-50	 Plateau	 Hill	 Till
Oquaga	 35 	 25-60 	699-1801	 35-50 	 Glaciated upland 	•	 Reddish ablation till derived from sandstone and siltstone
296329 Mardin	 85 	 3-8 	801-1801	 30-40 	 Glaciated upland 	 	
296330 Mardin	 85 	 8-15 	801-1801	 30-40 	 Glaciated upland 	 Hill 	 Loamy till
296331 Mardin	 85 	 3-8 	801-1801	 30-40 	 Glaciated upland 	, Hill 	 - Loamy till -
296332 Mardin	 87 	 8-25 	801-1801	 30-40 	 Glaciated upland 	 	 - Loamy till -
296335 Meckesville	 100 	 8-15 	600-2799	 34-48 	 Mountains 		 Sandstone, siltstone, and shale colluvium derived from sedimentary rock

Table 5.--Landscape, Landform, and Parent Material--Continued

Map unit symbol and soil name	Percent of map unit	Slope	Elevation	MAP	Landscape	Landform	Parent material
		ll	l	I	I	.	
	Pct	Pct	Ft	In	1	!]
96337 Meckesville 	100	 8-25 	 600-2799 	 34-48 	 Mountains 	 Mountain valley 	 Sandstone, siltstone, and shale colluvium derived from sedimentary rock
96338 Morris 	80	 3-8 	600-1801	•	 Glacial upland 	· •	Reddish ablation till derived from sandstone and siltstone
96339 Morris 	75	 0-8 	600-1801		 Glacial upland 	 Till plain 	Reddish ablation till derived from sandstone and siltstone
96340 Morris 	80	 0-20 	600-1801		 Glacial upland 	•	Reddish ablation till derived froms sandstone and siltstone
96341 I] 	I I]]
Freetown, mucky peat	100	 0-2 		 34-51 	 Uplands 	_	 Highly decomposed organic material
Paupack, mucky Paupack, mucky peat (shallow) 	100	 0-2 	801-2001	 42-47 	 Uplands 	· -	 Woody organic material over gravelly alluvium
!96343 Oquaga 	50	 3-8 3 	600-1801		 Glaciated upland 		 Reddish ablation till derived from sandstone and siltstone
 Lackawanna 	35	3-8 3-8 	 1099-1801 	 32-50 	 Uplands 	hillslope	Reddish ablation till derived from sandstone and siltstone
! 296344 Oquaga 	55	 	600-1801		 Glaciated upland 		 Reddish ablation till derived from sandstone and siltstone
 296344 Lackawanna 	30	 	 1099-1801 	 32-50 	 Uplands 		 Reddish ablation till derived from sandstone and siltstone

Table 5.--Landscape, Landform, and Parent Material--Continued

	15					· · · · · · · · · · · · · · · · · · ·	
Map unit symbol and soil name	Percent of map unit	Slope	 Elevation 	 MAP 	 Landscape 	 Landform 	 Parent material
	!	!	!	!	!	!	!
296346 Oquaga	İ	<i>Pct</i> 0-8	İ	<i>In</i> 35-50		 Hillslope	 Reddish ablation
	 	 	 	 	upland 	 	till derived from sandstone and siltstone
Lackawanna	35 	0-8 	1099-1801 	32-50 	İ		Reddish ablation till derived from sandstone and siltstone
296347 Oquaga	 60 	 8-25 	 699-1801 	 35-50 	 Glaciated upland 	 Hillslope 	 Reddish ablation till derived from sandstone and siltstone
Lackawanna	 30 	 8-25 	 1099-1801 	 32-50 	İ	•	 Reddish ablation till derived from sandstone and siltstone
296348 Philo	 85 	 0-3 	 600-2999 	 40-55 	 - River valley - - -	 - Flood plain - -	 Coarse-loamy alluvium derived from sandstone and siltstone
296349 Pope	 90 	 0-3 	 	 34-51 	 River valley 	 - Flood plain - - -	 Coarse-loamy alluvium derived from sandstone and siltstone
296350 Pope	90 	0-3 	 	34-51 	 River valley 	 Flood plain 	 Coarse-loamy alluvium derived from sandstone and siltstone
296351 Rexford, somewhat poorly drained	 40 	 0-3 	 	 34-51 	 Uplands 	 Outwash plain 	 - Coarse-loamy outwash derived from sandstone and shale
Rexford, poorly drained	 35 	 0-3 	 	 34-51 	 Uplands 		 Coarse-loamy outwash derived from sandstone and shale
296355 Sheffield	 100 	 0-3 	 925-1089 	 34-44 	 Uplands 	 Depression on till plain 	 Till Till
296363 Dystrochrepts, very stony	 85 	 25-99 	 1099-2500 	 36-55 	 Mountains 	 Mountain slope 	 Colluvium
296369 Wayland	 100 	 0-3 	 200-1499 	 30-40 	 River valley 	 Flood plain 	 Recent alluvium

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent	<u> </u>					<u> </u>
		Slope	Elevation	MAP 	, Landscape 	Landform 	Parent material
	Pct	Pct	Ft	In	i	' <u></u>	-'
296376 Wellsboro	 80 	 3-8 	1099-1801	 32-50 	 Uplands 	 Valley side 	 Red till
296379 Wellsboro	 85	 8-25	1099-1801	 32-50	 Uplands 	 Valley side	 Red till
296385 Wyoming	 85 		400-1801	 42-50 	 Uplands 	 Terrace 	Water sorted gravelly outwash derived from sandstone and siltstone and/or shale
296386 Wyoming	85 	 3-8 	400-1801	 42-50 	 Uplands 	 Terrace 	
296387 Wyoming	 85 		400-1801	 42-50 	 Uplands 	 Terrace 	
296388 Wyoming	 85 	 15-25 	400-1801	 42-50 	 Uplands 	 	Water sorted gravelly outwash derived from sandstone and siltstone and/or shale
296389 Wyoming	 100 	 25-70 	400-1801	 42-50 	 Uplands 	 Terrace 	Water sorted gravelly outwash derived from sandstone and siltstone and/or shale
296390 Water	 100			 34-51	 		i !
297185 Edgemere	 42	 3-8	600-1299	 35-50	 	 Depression	 Till
Shohola	 42	ı 3-15	600-1299	 40-46	 		 Till
297186 Edgemere	 75	 0-3	600-1299	 35-50	 Uplands 	 Depression	 Till
297188 Manlius	 40 	 	200-1801	 30-50 	 Uplands 	 Valley side 	 Channery till derived from shale
Arnot		 15-30 	 -	 34-51 	 Uplands 	 Valley side 	 Till
Rock outcrop	15	 15-30 		 34-51 	 	i	 !

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent		Floreties	143.5	 Tandacasa	 Tandfa	 Parent
Map unit symbol and soil name	of map unit 		Elevation	MAP 	Landscape 	Landform 	Parent material
	Pct	Pct	Ft	In	1	ı	I
297189 Manlius	 40 	 30-80 	200-1801	 30-50 	 Uplands 	· <u>-</u>	 Channery till derived from shale
Arnot	•	 30-80 	 	 34-51 		 Valley side 	 Till
Rock outcrop	•	 30-80 		 34-51 	•	' 	'
297190 Braceville	 82 		400-899	 44-47 	 Uplands 	 Outwash terrace 	 Outwash
297191 Wyalusing	85 	 0-3 	400-801	 30-50 	 River valley 	Ī	 Coarse-loamy alluvium over sandy and gravelly alluvium
297192 Pope	95 	 0-3 		34-51 	 River valley 	 Flood plain 	 Acid alluvium derived from sedimentary rock
297193 Paupack	 90 	0-2 0 1	801-2001	 42-47 	Uplands 	İ	 Woody organic material over gravelly alluvium
297196 Freetown	 94 	 0-1 		 34-51 	' Uplands 	_	 Highly decomposed organic material
297197 Manlius	 90 	3-8 3-8	200-1801	 30-50 	 Uplands 	· -	 - Channery till derived from shale
297198 Manlius	 86 	 	200-1801	 30-50 	 Uplands 		 Channery till derived from shale
297201 Oquaga	 75 	 15-30 	699-1801		 Glaciated upland 	İ	 Reddish ablation till derived from sandstone and siltstone
297203 Delaware	 93 	 0-3 	400-600	 35-50 	· -	 Low to middle river terrace 	 Postglacial alluvium derived from sandstone and shale
297204 Delaware	 82 	 3-8 	400-600	 35-50 	· -	 Low to middle river terrace 	 Postglacial alluvium derived from sandstone and shale
297205 Delaware	 80 	 	400-600	 35-50 	· -	river terrace	 Postglacial alluvium derived from sandstone and shale
297209 Philo	 85 	 0-3 0-3 	600-1401	 35-50 	 River valley 	 	 Coarse-loamy alluvium derived from sandstone and siltstone

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent	1	 I		1		
			 Elevation	MAP	ı Landscape	Landform	 Parent
and soil name	unit	i	l	I	<u> </u>	I	material
	l	 <i>Pc</i> t	 <i>Ft</i>	ļ	<u> </u>		<u> </u>
297210	l PCT	PCT 	, ∦ ^t	<i>In</i> 	1 	! 	1
Barbour	85	0-3	1000-1800	34-51	Valley	Flood plain	Recent alluvium
	I	1	l	I	I	I	l
297216			1000 1000				
Wurtsboro	92 	U-8	1000-1800 		Glacial upland		Coarse-loamy till derived from
	i i			i	uprana 	i I	sandstone
	İ	i i	İ	İ	İ	İ	İ
297217			l 		<u> </u>	1	<u>.</u>
Wurtsboro	88	8-15	1000-1800				Coarse-loamy till
	! !	 	l 1	 	upland 	I I	derived from sandstone
	i i			i	i I	İ	l
297227	İ	i i	İ	į	İ	İ	İ
Arnot	l 88	3-15	1001-1801	35-45	Uplands	Valley side	Till
007000	!		 -	!	!	1	<u> </u>
297228 Arnot	I I 85	I 15-35	 1001-1801	I 135-45	l IIInlands	 Valley side	 Till
ATHOC	1	1	1001 1001 	1	l		I
297229	i	i i	İ	į	i	i İ	i
Wyoming	90	3-8	400-1801	42-50	Uplands	Terrace	Outwash
007020	!		 -	!	!	1	<u> </u>
297230 Wyoming	I 90	I 8-15	 400-1801	142-50	 IInlande	 Terrace	 Outwash
wyoming	1 30 1	 6-15	400-1801	42-50 	l opianos	Terrace	Outwash
297231	i	i	i I	i	i	i	i i
Wyoming	90	15-30	400-1801	42-50	Uplands	Terrace	Outwash
	1			1	!	I	I
297236 Suncook	l I 91	l I 0-8	400 1801	124 51		 Elect mleim	 Conduction
Suncook	l 1 3T	U-8	400-1801 	134-31	ı I varrey	_	Sandy glaciofluvial deposits derived
	i	i	! 	i	i I		from sandstone
	ĺ	İ i	l	Ì	ĺ	İ	İ
297237					<u> </u>		<u> </u>
Mardin	85	0-8	801-1801	30-40	Uplands	Hill	Loamy till
297238	! !	I	! 	l I	 Uplands	 Hill	 Loamy till
	i	i	i I	i		 	
297239	I	1	l	I	I	I	I
Mardin	85	0-8	801-1801	130-40	Uplands	Hill	Loamy till
297240			 			1	
Mardin	ı I 85	 8-15	 801-1801	1 130-40	ı Uplands	 Hill	 Loamy till
	 I	i -		i		i	
297241	I	1	l	I	I	I	I
Unadilla	90	0-3	400-600	142-50	Uplands	Outwash terrace	Outwash
297242	I I	I] 	I I	 	I I]
Shohola	I 62	I 0-8	 600-1299	140-46	Uplands	 Bench	। Till
	. <u></u>	-		- 0	 	 	. – I
Edgemere	29	0-8	600-1299	35-50	Uplands	Depression	Till
007040	!	!		!	!	I	<u> </u>
297243 Shohola	l I 62	 8-15	 600-1299	1 140-46	 	 Bench	l I
SHORIOTA	, 02 	10 10	000-1299 	1-20-40	opiands	Delicii	!
Edgemere	, 29	 8-15	 600-1299	35-50	Uplands	 Depression	' Till
-	I	ı i	l	I	I	I	I
297244				I	l		
Lordstown	40	0-8	751-1801 	132-50	l∪p⊥ands ı	Hill	Till
Swartswood	ı I 35	I 0-8	 1001-1801	140-46	ı Upland	 Hill	 Coarse-loamy till
- ·	 	-		i	<u> </u>		derived from
	I	1	l	I	I	I	sandstone
	I	I I	l	I	I	I	I

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent of map		Elevation	I IMAD	 Landscape	 Landform	 Parent
and soil name	Unit unit				Handscape 		material
	Pct	Pct	Ft	In	i	i	İ
297247 Chenango	 86 	 0-8 	400-1099	 38-42 	 Uplands 	 Glacial outwash terrace	 Till
297248 Chenango	 85 		400-1099	 38-42 	 Uplands 	 Glacial outwash terrace	 Till
297249 Chenango	 90 	 15-25 	400-1099	 38-42 	_	 Glacial outwash terrace 	 Till
297253 Craigsville	 50	 0-5	899-3501	 36-46	 Mountains	, Flood plain	;
Wyoming	 40	 0-8	400-1801	 42-50	 Uplands	 Terrace	
297254 Pits, shale	 40	 0-40 		 36-46 	 	 	
Pits, gravel	40	 0-40		 36-46	 	 	
298049 Wurtsboro, extremely stony	 90 		400-1804	 30-64 	 Till plain 	 Ground moraine 	 - Coarse-loamy till derived from sandstone
298050 Wurtsboro, extremely stony	 60 	 	400-1102	 30-64 	 Till plain 		 - Bouldery, quartzose, coarse-loamy drift derived from conglomerate
Swartswood, extremely stony	 40 		400-1102	 30-64 	 Till plain 	I	 Bouldery, quartzose, coarse-loamy drift derived from conglomerate
298051 Wurtsboro, extremely stony	 		400-1102	 30-64 	 Till plain 	 Ground moraine 	 - Bouldery, quartzose, coarse-loamy drift derived from conglomerate
298051 Swartswood, extremely stony	 40 	 	400-1102	 30-64 	 Till plain 	I	
298075 Colonie	80 80 	 3-8 	755-1745	 30-64 	 River valley 	I	 Postglacial sandy alluvium, sandy eolian deposits, and/or glaciofluvial deposits

Table 5.--Landscape, Landform, and Parent Material--Continued

	I Domeses'					1	
	Percent of map unit	Slope	 Elevation 	I MAP 	 Landscape 	 Landform 	 Parent material
	I	l	l	I	l	l	I
298188 Lackawanna,	Pct 	Pct 	Ft 	In 	 	 	
extremely stony 298189	85 	15-35 	1099-1801 	30-64 	Mountains 	 	Coarse-loamy till derived from sandstone and siltstone and/or coarse-loamy till derived from shale
Lackawanna, extremely stony	 85 	 8-15 	 1099-1801 	 30-64 	 Mountains 	 Ground moraine 	 Coarse-loamy till derived from sandstone and siltstone and/or coarse-loamy till derived from shale
298221 Swartswood, extremely stony	 90 	 	 400-1804 	 30-64 	 Till plain 	 Ground moraine 	 Coarse-loamy till derived from sandstone
298222 Swartswood, extremely stony	 90 	 	 400-1804 	 30-64 	 Till plain 	 Ground moraine 	 - Coarse-loamy till derived from sandstone
298223 Swartswood, extremely stony	 85 	 15-35 	 400-1804 	 30-64 	 - Till plain - - 	 - Ground moraine - -	 - Coarse-loamy till derived from sandstone
298255 Delaware, rarely flooded	 80 	 	 400-600 	 30-64 	 River valley 	 - Terrace -	 - Postglacial coarse loamy alluvium
298256 Delaware, rarely flooded	 80 	 0-3 	 400-600 	 30-64 	 River valley 	 Terrace 	 Postglacial coarse- loamy alluvium
298257 Wallpack	 85 	 8-15 	 400-1496 	 30-64 	 Till plain 	_	 - Coarse-loamy till derived from limestone, sandstone, and shale
298258 Wallpack	 85 	 15-25 	 400-1496 	 30-64 	 Till plain 		 Coarse-loamy till derived from limestone, sandstone, and shale

Table 5.--Landscape, Landform, and Parent Material--Continued

	15						
Map unit symbol and soil name	Percent of map unit	Slope	 Elevation 	 MAP 	 Landscape 	 Landform 	 Parent material
298259 Wallpack, extremely stony	 	 Pct 	i I	In In	 	 Ridge 	 - Coarse-loamy till derived from limestone, sandstone, and
298260 Wallpack, extremely stony	 85 		 	 30-64 	 Till plain 	 	shale - Coarse-loamy till derived from limestone, sandstone, and shale
298261 Wallpack	 85 	 0-8	 400-1496 	 30-64 	 Till plain 	 Ridge 	 Coarse-loamy till derived from limestone, sandstone, and shale
298262 Wallpack, extremely stony	 85 	 15-35 	 400-1496 	 30-64 	 Till plain 	 Ridge 	
298265 Venango, extremely stony			 400-1001 	 30-64 	 Drumlin field 	 	 - Fine-loamy till derived from limestone, sandstone, and shale
298266 Venango, extremely stony			 	 30-64 	 Drumlin field 	 Drumlin 	 - Fine-loamy till derived from limestone, sandstone, and shale
298409 Swartswood, extremely stony	 90 		 	 30-64 	 Till plain 	 Ground moraine 	 Coarse-loamy till derived from sandstone
298411 Swartswood, extremely stony	 90 	 	 	 30-64 	 Till plain 	 - Ground moraine - -	 Coarse-loamy till derived from sandstone
298413 Swartswood, extremely stony	 85 	 15-35 	 400-1804 	 30-64 	 Till plain 	 Ground moraine 	 Coarse-loamy till derived from sandstone

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent						
Map unit symbol and soil name		Slope	Elevation	MAP	 Landscape 	Landform 	Parent material
	 Pct	 Pct	Ft	' In	<u>'</u>	<u> </u>	<u>'</u>
318498 Hazen, very stony	İ	3-8 3-8 	İ	 30-64	 Outwash plain 	 Valley train 	 Coarse-loamy glaciofluvial deposits derived from limestone, sandstone, and shale
Hoosic, very stony-	 35 	3-8 3-8 	 400-801 	•	 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
318533 Hazen, very stony	50 50 	0-3	400-801	 30-64 	 Outwash plain 	 Valley train 	 Coarse-loamy glaciofluvial deposits derived from limestone, sandstone, and shale
Hoosic, very stony-	 40 	0-3 0-3 	400-801 	•	 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
319783 Catden	 85 		 400-1804 	 30-64 	 Till plain 	 Depression 	 Herbaceous organic material and/or woody organic material
319784 Fredon, very stony-	50 		400-801	 30-64 	 Outwash plain 	 Drainageway 	 Coarse-loamy over sandy and gravelly glaciofluvial deposits derived from limestone, sandstone, and shale
319784 Halsey, very stony-	 40 		400-801	•	 Outwash plain 	 Drainageway 	
543222 Andover, extremely stony		 0-8 0-8 	600-1001	 35-50 	 Colluvial valley 	 Sandstone and shale hillslope 	
Buchanan, extremely stony	 40 		 600-2402 		 Colluvial valley 	 Sandstone and shale hillslope 	 Colluvium derived from sandstone and shale

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent	I I		Ī	 I	<u> </u>	<u> </u>
Map unit symbol and soil name	•	 Slope	Elevation	MAP 	Landscape 	Landform 	Parent material
	Pct	 <i>Pct</i>	Ft		'i	' 	
543243 Berks	 65 	 25-60 	499-1499	 35-50 	_	•	Acid, brown residuum weathered from shale and siltstone
Weikert	25 	 25-60 	499-1601	 36-50 	 Valley 		Acid, brown residuum weathered from shale and siltstone
543246 Buchanan	 75 	 3-8 	700-1400	 38-46 		·	Colluvium derived from sandstone and shale
543247 Buchanan, extremely stony	 80 	 0-8 0 	700-1400	 38-46 	•	 Mountain slope Valley side 	 Stony colluvium derived from sandstone and shale
543257 Chippewa	 90 		801-1801	 30-45 	 Upland 	 Depression 	 Till derived from sedimentary rock
543258 Chippewa	 90 		801-1801	 30-45 	 Upland 	 Depression 	 Till derived from sedimentary rock
543259 Chippewa, extremely stony	 90 	 	801-1801	 30-45 	 Upland 	 Depression 	Till derived from
543271 Delaware	 90 		400-600	 35-50 	· -	 Low to middle river terrace	Postglacial alluvium derived from sandstone and shale
543276 Fluvaquents	 85 	 0-2 	7-801	 40-48 	 Valley 	 Flood plain 	 Alluvium derived from sedimentary rock
543292 Hazleton, extremely stony	 90 	 	1099-2500	 36-55 	 Mountains 	·	 Loamy residuum weathered from sandstone
543293 Hazleton, extremely stony	 90 	 	1099-2500	 36-55 	 Mountains 	·	Loamy residuum weathered from sandstone
543299 Laidig, extremely stony	 90 		400-3799	 34-40 	 Mountains 	conglomerate,	Brown fine-loamy colluvium derived from sandstone and siltstone

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent						
		Slope	 Elevation 	MAP MAP 	 Landscape 	 Landform 	 Parent material
543300 Laidig, extremely	 Pct 	Pct	Ft	<u>In</u> 	' 	 	
stony	90 	8-25 	400-3799	34-40 	Mountains 	conglomerate, quartzite, &	Brown fine-loamy colluvium derived from sandstone and siltstone
543304 Laidig	 50 	 25-60 	400-3799	 34-40 	 Mountains 	conglomerate, quartzite, &	 Brown fine-loamy colluvium derived from sandstone and siltstone
Rubble land	40 	25-60 	1001-2999	36-50 	Mountains 	• •	Stones and boulder fields of sandstone
543318 Rubble land	 75 	 0-90 	 600-2000 	 36-50 	 Mountains 	 Mountain slope 	 Stones and boulder fields of sandstone
543327 Swartswood	 90 	 3-8	1001-1801	 40-46 	 Upland 	 	 Glacial till derived from quartzite, conglomerate, and/or sandstone
543328 Swartswood	90 90 	 8-15 	1001-1801	 40-46 	 Upland 	 	 Glacial till derived from quartzite, conglomerate, and/or sandstone
543330 Swartswood, extremely stony	 50 51 1	 0-8 1 1 1 1 1 1 1 1 1	1001-1801	 40-46 	 Upland 	 	 Glacial till derived from quartzite, conglomerate, and/or sandstone
Wurtsboro, extremely stony	 30 	 0-8 0-8 	1001-1801	 40-46 	 Glacial upland 	İ	 - Glacial till derived from quartzite, conglomerate, and/or sandstone
543331 Swartswood, extremely stony	 50 51 1 1	 	1001-1801	 40-46 	 Upland U 	İ	 - Glacial till derived from quartzite, conglomerate, and/or sandstone

Table 5.--Landscape, Landform, and Parent Material--Continued

Map unit symbol and soil name	Percent of map unit	Slope	 Elevation 	MAP	 Landscape 	 Landform 	 Parent material
	!	!!	!	!	!	!	<u> </u>
543331 Wurtsboro, extremely stony	 30	Pct 	Ft 1001-1801 	In 40-46 	 Glacial upland 	 Hill 	 Glacial till derived from quartzite, conglomerate, and/or sandstone
543359 Volusia	 85 	 3-8 3-8 	 801-1801 	 30-40 	 	 Valley side 	
543360 Volusia, extremely stony		 0-8 	 801-1801 	 30-40 	 Plateau 	 Valley side 	
543374 Wurtsboro	 90 	 3-8 	 1001-1801 	 40-46 	 Glacial upland 	 Hill Hill 	 Glacial till derived from quartzite, conglomerate, and/or sandstone
543375 Wurtsboro	 	 	 1001-1801 	 40-46 	 Glacial upland 	 Hill 	 - Glacial till derived from quartzite, conglomerate, and/or sandstone
612280 Scio	 80 	 0-3 	 98-1001 	 30-64 	 River valley 	 Inner terrace 	 Postglacial coarse- silty alluvium
612666 Colonie	 80 	 0-3 	 755-1745 	30-64 	 River valley 	 Cuter terrace 	 Postglacial sandy alluvium, sandy eolian deposits, and/or glaciofluvial deposits
612668 Hoosic, very stony-	 60 	 8-15 	 400-801 	•	 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
Hazen, very stony	 30 	 8-15 	 400-801 	•	 Outwash plain 	 Valley train 	 Coarse-loamy glaciofluvial deposits derived from limestone, sandstone, and shale

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent			<u> </u>		 I	<u> </u>
	•	Slope	Elevation	I MAP 	 Landscape 	 Landform 	 Parent material
	 Pct	 Pct	Ft		¦	¦	¦
612724 Lordstown, very rocky	 50 	 15-35 	400-801	 30-64 	 Till plain 	 Ridge 	 - Coarse-loamy till derived from limestone, sandstone, and shale
Wallpack, very rocky	 40 	 	400-801	 30-64 	 Till plain 	•	 - Coarse-loamy till derived from limestone, sandstone, and shale
612732 Atherton, very poorly drained	 60 		49-1499	 30-64 	 River valley 	 Depression 	 - Postglacial fine-silty alluvium
Atherton, poorly drained	 30	 0-3 	49-1499	 30-64 	 River valley 	 Depression 	 - Postglacial fine-silty alluvium
612738 Fluvaquents, occasionally flooded	 90 	 		 30-64 	 River valley 	 Flood plain 	
612753 Wallpack, aeolian mantle, very stony	 85 		400-801	 30-64 	 Till plain 	-	 Eolian deposits over coarse-loamy till derived from limestone, sandstone, and shale
612756 Wallpack, aeolian mantle, very stony	 85 	 	400-801	 30-64 	 Till plain 		Sandstone, and Share
612757 Wallpack, aeolian mantle, very stony			400-801	 30-64 	 Till plain 	I	 Eolian deposits over coarse-loamy till derived from limestone, sandstone, and shale
612767 Wellsboro, extremely stony	 85 85 		1099-1801	 30-64 	 Mountains 	 	 Coarse-loamy till derived from shale and/or coarse-loamy till derived from sandstone and siltstone

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent						 I
Map unit symbol and soil name		Slope	 Elevation 	MAP 	 Landscape 	 Landform 	 Parent material
	!	!!	!	!	<u> </u>	!	<u></u>
612768 Wellsboro, extremely stony	l I	Pct 	Ft 1099-1801 	In 30-64 	 Mountains 	 - Ground moraine - - - - - -	
613393 Alden, extremely stony	 		400-1804	 30-64 	 Till plain 	 Depression 	 Silty colluvium derived from sandstone over fine-loamy till derived from sandstone
613447 Unadilla	 85 	 0-3 	600-1801	 30-64 	 River valley 	 Inner terrace 	 Postglacial coarse- silty alluvium
613448 Unadilla	 85 	 3-8 	600-1801	 30-64 	 River valley 	 Inner terrace 	 Postglacial coarse- silty alluvium
614075 Wurtsboro, extremely stony	 80 	 	400-1102	 30-64 	 Till plain 	 - Ground moraine - -	 - Bouldery, quartzose, coarse-loamy drift derived from conglomerate
Swartswood, extremely stony	 20 	 	400-1102	 30-64 	 Till plain 	 Ground moraine 	 Bouldery, quartzose, coarse-loamy drift derived from conglomerate
620179 Arnot, very rocky	' 55 	 	 400-1804 	 30-64 	 Mountains 	 Ground moraine 	 - Loamy till derived from conglomerate
Lordstown, very rocky	 40 	 0-15 	400-1804 	 30-64 	 Mountains 		 Coarse-loamy till derived from conglomerate
620180 Arnot	 45 	 15-35 	400-1804	 30-64 	 Mountains 		 - Loamy till derived from conglomerate
Lordstown	 40 	 15-35 	400-1804 	 30-64 	 Mountains 		 Coarse-loamy till derived from conglomerate
Rock outcrop	 15 	 	 400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Conglomerate
620181 Arnot	 60 	 35-60 	400-1804 	 30-64 	 Mountains 		 Loamy till derived from conglomerate

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent	1 1				I	
		Slope	Elevation	 MAP 	 Landscape 	Landform 	Parent material
	Pct	Pct	Ft Ft	In	¦	<u> </u>	<u>'i</u>
620181 Lordstown	 25 	 35-60 	 400-1804 	 30-64 	 Mountains 		 Coarse-loamy till derived from conglomerate
Rock outcrop	 15	 	 400-1804 	 30-64 	 Mountains 	 Ground moraine	 Conglomerate
623089 Chippewa, extremely stony	80 	 	400-1001	 30-64 	 Drumlin field 		 - Fine-loamy till derived from limestone, sandstone, and shale
623109 Farmington	50 	 0-15 	400-902	 30-64 	 Till plain 	 Ground moraine 	 Loamy till derived from limestone and dolomite
Rock outcrop	40 	 	400-902	 30-64 	 Till plain 	 Ground moraine 	 Limestone and dolomite
624811 Galway, very rocky-	 80 	 	400-902	 30-64 	 Till plain 		 Coarse-loamy till derived from limestone and dolomite
624813 Lackawanna, extremely stony	85 		1099-1801	 30-64 	 Mountains 	 	
624816 Lordstown, very rocky	 50 		 400-801 	 30-64 	 Till plain 		 Coarse-loamy till derived from limestone, sandstone, and shale
Wallpack, very rocky	35 	 8-15 	400-801	 30-64 	 Till plain 	I	 Coarse-loamy till derived from limestone, sandstone, and shale
624822 Lordstown	50 50	 15-25 	400-801	 30-64 	 Till plain 	I	 Coarse-loamy till derived from limestone, sandstone, and shale
Wallpack	 35 	 15-25 	400-801 	 30-64 	 Till plain 	 	 Coarse-loamy till derived from limestone, sandstone, and shale

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent		 Elevation	 M2D	 Landscape	 Landform	 Parent
and soil name	or map unit	_	 ETGAUCTOU	 MWL	Handscape		material
	l	 Pct	 <i>Ft</i>		<u> </u>	<u> </u>	
624823	İ	i	İ	İ	İ	 	
Lordstown	50 	8-15 	400-801 	30-64 	Till plain 	Ridge 	Coarse-loamy till derived from limestone, sandstone, and shale
Wallpack	 35 	 8-15 	 400-801 	30-64 	 Till plain 	 Ridge 	 Coarse-loamy till derived from limestone, sandstone, and shale
624824 Lordstown	 50 	 0-8 	 400-801 	 30-64 	 Till plain 	 - Ridge - -	 - Coarse-loamy till derived from limestone, sandstone, and shale
Wallpack	 35 	 0-8 	 400-801 	 30-64 	 Till plain 	 Ridge 	 Coarse-loamy till derived from limestone, sandstone, and shale
624826 Manlius, very rocky	 60 	 35-60 	 400-801 	 30-64 	' Till plain 	 Ridge 	 - Loamy till derived from acid shale
Nassau, very rocky-	 25 	I 35-60 	 400-801 	 30-64 	 Till plain 	 Ridge 	 Loamy till derived from acid shale
624827 Nassau, very rocky-	 55 	 0-8 	 400-1552 	 30-64 	 Till plain 	 Ground moraine 	 Loamy till derived from acid shale
Manlius, very rocky	 44 	 0-8 	 400-1552 	 30-64 	' Till plain 		Loamy till derived from acid shale
624828 Nassau, very rocky-	 55 	 8-15 	 400-1552 	 30-64 	 Till plain 		 Loamy till derived from acid shale
Manlius, very rocky	 44 	 8-15 	 400-1552 	 30-64 	 Till plain 	 Ground moraine 	Loamy till derived from acid shale
624829 Nassau, very rocky-	 55 	 15-35 	 400-1552 	 30-64 	 Till plain 	 Ground moraine 	 Loamy till derived from acid shale
Manlius, very rocky	 44 	 15-35 	 400-1552 	 30-64 	 Till plain 		 Loamy till derived from acid shale
624832 Nassau	 50 	 35-60 	 400-1552 	 30-64 	 Till plain 		 Loamy till derived from acid shale
Rock outcrop	 45 	 	 400-1552 	 30-64 	 Till plain 	 Ground moraine 	 Acid shale
624841 Oquaga	 60 	 35-60 	 699-1801 	 30-64 	 Mountains 		 Loamy till derived from sandstone and siltstone and/or loamy till derived from shale
Rock outcrop	 25 	 	 699-1801 	 30-64 	 Mountains 	 Ground moraine 	 Sandstone

Table 5.--Landscape, Landform, and Parent Material--Continued

Percent											
	Percent of map unit	Slope	 Elevation 	 MAP 	 Landscape 	 Landform 	 Parent material				
	l	 Pct	 		¦	<u> </u>	 				
624845 Rock outcrop	ĺ	100 		i	İ	 Ground moraine 	 Limestone and dolomite				
Farmington	 35 	 15-35 	 400-902 	 30-64 	 Till plain 	 Ground moraine 	 Loamy till derived from limestone and dolomite				
Galway	 20 	 15-35 	400-902	 30-64 	 Till plain 		 Coarse-loamy till derived from limestone and dolomite 				
624846 Rock outcrop	 40	 	 400-1804	 30-64 	 Mountains 	 Ground moraine 	 - Conglomerate 				
Arnot	, 30 	60-80 	400-1804	 30-64 	 Mountains 	 Ground moraine 	 Loamy till derived from conglomerate				
Rubble land	 20 	 60-80 	 400-1804 	 30-64 	 Mountains 	 Talus slope 	 Talus derived from conglomerate				
626816 Udifluvents, occasionally flooded	 	 0-3	 	 	 	 	 				
ilooded	90 	U-3 	 	30-64 	River valley 	 	Coarse-loamy alluvium 				
635458 Oquaga, very rocky-	 55 	 8-15 	699-1801	 30-64 	 Mountains 		 Loamy till derived from sandstone and siltstone and/or loamy till derived from shale				
Lackawanna, very rocky	 30 	 8-15 	1099-1801	 30-64 	 Mountains 	 	 Coarse-loamy till derived from sandstone and siltstone and/or coarse-loamy till derived from shale				
635459 Oquaga, very rocky-	 50 	 15-35 	699-1801	 30-64 	 Mountains 		 Loamy till derived from sandstone and siltstone and/or loamy till derived from shale				
Lackawanna, very rocky	 35 	 15-35 	1099-1801	 30-64 	 Mountains 	 	 Coarse-loamy till derived from sandstone and siltstone and/or coarse-loamy till derived from shale				
740953 Delaware, rarely flooded	 80 	 0-3 	400-600	 30-64 	 River valley 	 Terrace 	 Postglacial coarse- loamy alluvium 				

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent	<u> </u>			 I	 I	 I
		Slope	 Elevation 	MAP 	 Landscape 	 Landform 	Parent material
	Pct	Pct	Ft	In	'	' <u></u>	'
740968 Nassau, very rocky-	 55 	 8-15 	 400-1552 	 30-64 	 Till plain 		 Loamy till derived from acid shale
Manlius, very rocky	 44 	 8-15 	 400-1552 	 30-64 	 Till plain 		 Loamy till derived from acid shale
740969 Nassau, very rocky-	 55 	 15-35 	400-1552	 30-64 	, Till plain 		 - Loamy till derived from acid shale
Manlius, very rocky	 44 	 15-35 	 400-1552 	 30-64 	 Till plain 		 Loamy till derived from acid shale
740971 Oquaga, very rocky-	55 	 8-15 	699-1801	30-64 	 Mountains 	 	 Loamy till derived from sandstone and siltstone and/or loamy till derived from shale
Lackawanna, very rocky	 30 	 8-15	1099-1801	 30-64 	 Mountains 	 	 Coarse-loamy till derived from sandstone and siltstone and/or coarse-loamy till derived from shale
740972 Oquaga, very rocky-	 50 	 15-35 	699-1801	 30-64 	 Mountains 	 	
Lackawanna, very rocky	 35 	 15-35 	1099-1801	 30-64 	 Mountains 	 	 Coarse-loamy till derived from sandstone and siltstone and/or coarse-loamy till derived from shale
740974 Oquaga	 60 	 35-60 	699-1801	 30-64 	 Mountains 	 	 Loamy till derived from sandstone and siltstone and/or loamy till derived from shale
Rock outcrop	 25 	 	 699-1801 	 30-64 	 Mountains 	 Ground moraine 	 Sandstone
740975 Rock outcrop	 40 	 	 400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Conglomerate
Arnot	 30 	 60-80 	400-1804	30-64 	 Mountains 		 Loamy till derived from conglomerate
Rubble land	 20 	 60-80 	 400-1804 	 30-64 	 Mountains 	 Talus slope 	 Talus derived from conglomerate

Table 5.--Landscape, Landform, and Parent Material--Continued

							<u> </u>
	Percent of map unit	Slope	 Elevation 	 MAP 	 Landscape 	 Landform 	 Parent material
	'	Pct	Ft	'—In	<u>'</u>	<u>'</u>	<u>'</u>
740987 Scio	 80 	 0-3 	 98-1001 	 30-64 	 River valley 	 Inner terrace 	 Postglacial coarse- silty alluvium
740988 Udifluvents, occasionally flooded	 90	 0-3	 		 River valley	 -	 Coarse-loamy
1100ded	90	0-3			 	 	alluvium
740991 Unadilla	 	 0-3 	 600-1801 	 30-64 	 River valley 		 Postglacial coarse- silty alluvium
740992 Unadilla	' 85 	 3-8 	 600-1801 	 30-64 	 River valley 		 - Postglacial coarse- silty alluvium
740995 Wellsboro, extremely stony	 85 	 	 1099-1801 	 30-64 	 Mountains 	 	
740996 Wellsboro, extremely stony	 85 		 1099-1801 	 30-64 	 Mountains 	 	sandstone and siltstone Coarse-loamy till derived from shale and/or coarse-loamy till derived from sandstone and siltstone
741149 Lackawanna, extremely stony	 85 	 	 	 30-64 	 Mountains 	 	
741150 Lackawanna, extremely stony	 85 85 	 15-35 	 1099-1801 	 30-64 	 Mountains 	 	 Coarse-loamy till derived from sandstone and siltstone and/or coarse-loamy till derived from shale
801114 Oquaga	 75 	 	 699-1801 	 30-64 	 Mountains 	 	 Loamy till derived from sandstone and siltstone and/or loamy till derived from shale
Rock outcrop	 15 	 	 699-1801 	 30-64 	 Mountains 	 Ground moraine 	 Sandstone

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent	1 1			 I		
		Slope	Elevation	MAP	 Landscape 	 Landform 	Parent material
	 Pct	 Pct	 Ft		'	'	!
810906 Oquaga	 75 	 0-15	699-1801	 30-64 	 Mountains 	 Ground moraine 	 Loamy till derived from sandstone and siltstone and/or loamy till derived from shale
Rock outcrop	 15 	 	 699-1801	 30-64	 Mountains 	 Ground moraine	 Sandstone
1147465 Alden, extremely stony	 90 	 	400-1804	 30-64 	 Till plain 	 Depression 	 Silty colluvium derived from sandstone over
1147467	 	 		 	 	 	fine-loamy till derived from sandstone
1147467 Arnot, very rocky	I 55 	 0-15 	400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Loamy till derived from conglomerate
Lordstown, very rocky	 40 	 0-15 	 400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Coarse-loamy till derived from conglomerate
1147468 Arnot	 45 	 15-35 	400-1804	 30-64 	 Mountains 		 - Loamy till derived from conglomerate
Lordstown	 40 	 15-35 	400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Coarse-loamy till derived from conglomerate
Rock outcrop	 15 	 	 400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Conglomerate
1147469 Arnot	 60 	 35-60 	 400-1804 	 30-64 	 Mountains 		 Loamy till derived from conglomerate
Lordstown	 25 	 35-60 	400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Coarse-loamy till derived from conglomerate
Rock outcrop	 15 		 400-1804 	 30-64 	 Mountains 	 Ground moraine 	 Conglomerate
1147470 Atherton, very poorly drained	 	 	 49-1499 	 30-64 	 River valley 	 Depression 	 - Postglacial fine-silty alluvium
Atherton, poorly drained	 30	 0-3 	 49-1499 	 30-64 	 River valley 	 Depression 	 Postglacial fine-silty alluvium
1147471 Catden	 85 85 		400-1804	 30-64 	 Till plain 	 Depression 	 - Herbaceous organic material and/or woody organic material

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent of man		 Elevation	I IMAD	 Landscape	 Landform	 Parent
and soil name	OI Map unit 	_	Elevation	MAF 	Landscape 		material
	Pct	Pct	Ft	In	i	i	<u> </u>
1147474 Chippewa, extremely stony	80 		400-1001	 30-64 	 Drumlin field 	 Interdrumlin 	 Fine-loamy till derived from limestone, sandstone, and shale
1147475 Colonie	80 	 0-3 	755-17 4 5	 30-64 	 - River valley - - - -	 - Outer terrace - - - - -	 Postglacial sandy alluvium, sandy eolian deposits, and/or glaciofluvial deposits
1147478 Delaware, rarely flooded	 80	 3-8 	400-600	 30-64 	 River valley 	 Terrace 	 Postglacial coarse- loamy alluvium
1147482] 	[
Fredon, very stony-	50 	0-3 1 	400-801	•	 Outwash plain 	 Drainageway - - - -	
Halsey, very stony-	40 		400-801	 30-64 	 Outwash plain 	 Drainageway 	
1147485 Hazen, very stony 	60 	 3-8 	400-801	 30-64 	 Outwash plain 	 Valley train 	 Coarse-loamy glaciofluvial deposits derived from limestone, sandstone, and shale
Hoosic, very stony-	35 	 3-8 	400-801	 30-64 	 Outwash plain 	 Valley train 	Glaciofluvial deposits derived from sandstone and shale
1147490 Hoosic, very stony-	60 	 	400-801		 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
Hazen, very stony	 30 		400-801		 Outwash plain 	 Valley train 	 Coarse-loamy glaciofluvial deposits derived from limestone, sandstone, and shale

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent	1		 I	 I		
Map unit symbol and soil name		Slope	 Elevation 	MAP 	 Landscape 	Landform 	Parent material
	!	!!	<u> </u>	!	!	!	!
1147491	Pct	Pct	Ft	In		1	<u> </u>
Hoosic, very stony-	 50 	 25-60 	400-801 		 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
Otisville, very stony	40 	 25-60 	400-801		 Outwash plain 	 Valley train 	 Glaciofluvial deposits derived from sandstone and shale
1147492 Lackawanna, extremely stony	 85 		1099-1801 	 30-64 	 Mountains 		 Coarse-loamy till derived from shale and/or coarse-loamy till derived from sandstone and siltstone
1147500 Wurtsboro, extremely stony	 90 	 	400-1804	 30-64 	 Till plain 		 - Coarse-loamy till derived from sandstone
1147501 Wurtsboro, extremely stony	 	 	400-1102	 30-64 	 Till plain 		 - Bouldery, quartzose, coarse-loamy drift derived from conglomerate
Swartswood, extremely stony	 		400-1102	 30-64 	 Till plain 		 Bouldery, quartzose, coarse-loamy drift derived from conglomerate
1147502 Wurtsboro, extremely stony	 60 	 	400-1102	 30-64 	 Till plain 	 Ground moraine 	 - Bouldery, quartzose, coarse-loamy drift derived from conglomerate
Swartswood, extremely stony	 40 1		400-1102	 30-64 	 Till plain 		 Bouldery, quartzose, coarse-loamy drift derived from conglomerate
1147527 Udorthents	 		400-1496 	 30-64 	 Upland 		 Fill and/or disturbed original soil material

Table 5.--Landscape, Landform, and Parent Material--Continued

							<u> </u>
	Percent of map unit	Slope	 Elevation 	 MAP 	 Landscape 	 Landform 	 Parent material
	 Pct		 <i>Ft</i>	 In	¦	<u> </u>	<u>'</u>
1147527 Urban land	İ	100 0-3 	İ	į	i		 Buildings, pavement, and other impervious surfaces over
1147532	 	 	 	 	 	 	fill and/or disturbed original soil material
Udorthents	100 	0-8 	400-1496 	30-64 	Upland 		Fill and/or disturbed original soil material
Wurtsboro, extremely stony	80 	 15-35 	 400-1102 	 30-64 	 Till plain 		 Bouldery, quartzose, coarse-loamy drift derived from conglomerate
Swartswood, extremely stony	 20 	 15-35 	 400-1102 	 30-64 	 Till plain 	 Ground moraine 	 Bouldery, quartzose, coarse-loamy drift derived from conglomerate
1948749 Arnot	 90 	 3-8 	 1001-1801 	 35-45 	 Till plain 	 Valley side 	 Glacial till derived from sedimentary rock
1948750 Arnot	 90 	 8-15 	 1001-1801 	 35-45 	 Till plain 	 Valley side 	 Glacial till derived from sedimentary rock
1948751 Arnot	 90 	 15-25 	 1001-1801 	 35-45 	 Till plain 	 Valley side 	 Glacial till derived from sedimentary rock
1948774 Conotton	 90 	 3-8 	 620-909 	•	 Outwash plain 		 Stratified sand and gravel outwash
1948775 Conotton	 95 	 8-15 	 620-909 	•	 Outwash plain 		 Stratified sand and gravel outwash
1948776 Conotton	 95 	 15-25 	 620-909 	•	 Outwash plain 		 Stratified sand and gravel outwash
1948777 Conotton	 95 	 25-65 	 620-909 		 Outwash plain 		 Stratified sand and gravel outwash
1948797 Manlius	 90 	 3-8 	 200-1801 	 30-50 	 Till plain 	 Valley side 	 Thin till derived from shale

Table 5.--Landscape, Landform, and Parent Material--Continued

	Percent			1	I	I	I
Map unit symbol	of map	Slope	Elevation	MAP	Landscape	Landform	Parent
and soil name	unit	!!		!	!	1	material
	Pct	 Pct	Ft		'		<u> </u>
1948802	1	, , I I		i	i İ	i	i
Manlius	90	8-15 	200-1801	30-50 	Till plain 	Valley side 	Thin till derived from shale
1948818]	 		1	 	 	
Manlius	90	 15-25 	200-1801	30-50 	Till plain 	Valley side 	Thin till derived from shale
1948832		 			 	 	
Penargyl	90	3-8 3-8 	299-2100	34-50 	Upland 	Valley side - - - - - -	Colluvium derived from shale and siltstone and/or loamy glacial till derived from sedimentary rock
1948846 Phelps	90	 3-8 		•	 Outwash plain 	 Terrace 	 Silty or loamy over glacial outwash
1948855		 			 	 	
Udorthents, loamy	95 	0-8 	299-899	42-48 	Upland 	Ridge 	Graded areas of loamy sedimentary rock
1948989		' ' 			! 	! 	
Urban land 	65 	0-8 		36-46 	İ		Pavement, buildings, and other artificially covered areas
Delaware	25		400-600	 35-50 	 River valley 	 Low to middle river terrace	 Postglacial alluvium derived from sandstone and shale

Table 6a.--Land Management, Part I (Planting)

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

and soil name	Pct. of map	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	ard
	unit unit 	`		Rating class and limiting features 		 Rating class and limiting features 	
290836 Hoosic, very stony	 50 	Slope	•	•	 1.00 0.50		 0.50
Otisville, very stony	 40 	Sandiness	 0.50 0.50	Rock fragments	 1.00 0.50 0.50	İ	 0.50
296265 Alden	 100 	 Well suited 	 	 Well suited 	 	 Severe Low strength 	 1.00
296269 Fluvents, (alluvial land)		 Well suited 	 	 Well suited 	 	 Moderate Low strength	 0.50
296271 Alvira	 55 	 Well suited 	 	Rock fragments		 Severe Low strength 	 1.00
Watson	 35 	 Well suited 	 	Moderately suited Rock fragments	•	 Severe Low strength 	 1.00
296272 Bath	 85 	 - Well suited - -	 	•	 0.50 0.50	Strength	0.10
296273 Bath	 85 	 Well suited 	' 	·	 0.50 0.50	•	 0.10
296274 Bath	 85 	 Well suited 	 	Slope	 0.75 0.50		 0.10
296275 Bath	 90 	 Moderately suited Rock fragments 	 0.50	 Poorly suited Rock fragments Slope	 0.75 0.50	_	 0.10
296276 Bath	 90 	 Moderately suited Rock fragments 	 0.50 		 0.75 0.75	•	 0.10

Table 6a.--Land Management, Part I (Planting)--Continued

	<u> </u>	1		<u> </u>		<u> </u>	
and soil name	Pct. of map	hand planting		Suitability fo mechanical plant		Soil rutting haz 	ard
	unit 			Rating class and limiting features		Rating class and limiting features	
296277 Benson	 55 	_		 Poorly suited Rock fragments	•	 Severe Low strength	 1.00
296278 Benson	 60 			Rock fragments	•	 Severe Low strength 	 1.00
Rock outcrop	 20	 Not rated 	 	 Not rated 	 	 Not rated 	
296279 Benson	 60 	_	0.50	•	 1.00 0.75	•	 1.00
Rock outcrop	 25	 Not rated	 	 Not rated	 	 Not rated 	
296280 Braceville	 90 	 Well suited 	 	 Well suited 	 	 Severe Low strength	1 1.00
296281 Braceville	 90 	 Well suited 	 	 Moderately suited Slope		 Severe Low strength	1 1.00
296283 Buchanan		 Moderately suited Rock fragments 		Rock fragments	•	 Severe Low strength 	 1.00
296288 Chippewa	 48 	 Well suited 	 	 Moderately suited Rock fragments	 0.50	 Severe Low strength	 1.00
Norwich	 48 	 Well suited 	! !	Moderately suited Rock fragments		 Severe Low strength	 1.00
296289 Chippewa		_		•	•	 Moderate Low strength	 0.50
Norwich	 47 	_	 0.50	 Poorly suited Rock fragments	 0.75	 Moderate Low strength	 0.50
296295 Udorthents, cut and fill		 	 	I	 	 	
296297 Dekalb	 100 	· •	 0.50	•	 0.75	•	 0.10
296298 Dekalb	 100 	_	 0.50 0.50	Rock fragments	 1.00 0.75	•	 0.10

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	ard
				Rating class and limiting features 		 Rating class and limiting features 	
296303 Hazleton	 100 		 0.50	Rock fragments	 0.75	· -	 0.10
296304 Holly	 100 	 Well suited 	 	 Well suited 	•	 Severe Low strength 	 1.00
296311 Lackawanna	 40 	Rock fragments		•	•	 Severe Low strength 	 1.00
Bath		Rock fragments	 0.50 0.50	Slope		 Slight Strength 	 0.10
296312 Lackawanna	 80 	 Well suited 	 			Low strength	 1.00
296313 Lackawanna	 80 	 Well suited 	 	•		Low strength	 1.00
296315 Lackawanna	 80 	· · · · · · · · · · · · · · · · · · ·	 0.50 	Rock fragments		 Severe Low strength 	 1.00
296316 Lackawanna		· · · · · · · · · · · · · · · · · · ·	 0.50 	Slope		 Severe Low strength 	 1.00
296317 Laidig	 100 	- <u>-</u>	 0.50	 Poorly suited Rock fragments 	•	 Moderate Low strength 	 0.50
296326 Lordstown	 85 	- <u>-</u>	 0.50		 0.75 0.50		 1.00
296327 Lordstown	 85 		 0.50	•		 Severe Low strength 	 1.00
296328 Lordstown	 40 	Rock fragments	 0.50	•		 Severe Low strength 	 1.00
Oquaga	 35 	Rock fragments Slope	0.50	•	1.00 0.75	•	 0.10

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	zard
	_			 Rating class and limiting features 		Rating class and limiting features 	
296329 Mardin	 85 	 Well suited 	 	 Moderately suited Slope Rock fragments	0.50	Strength	 0.10
296330 Mardin	 85 	 Well suited 	 	 Moderately suited Slope Rock fragments	0.50	Strength	 0.10
296331 Mardin	 85 	 Well suited 	 	 Moderately suited Rock fragments Slope		Low strength	 1.00
296332 Mardin	 87 	 Well suited 	 	•	0.75	 Severe Low strength 	 1.00
296335 Meckesville	 100 	 Well suited 	 			Low strength	 1.00
296337 Meckesville	 100 	 Well suited 	 	Slope	•	 Severe Low strength 	 1.00
296338 Morris	 80 	 Well suited 	 	•		Low strength	 1.00
296339 Morris		 Moderately suited Rock fragments 		· -	•	 Severe Low strength 	 1.00
296340 Morris	 80 	· -	 0.50 	_	 0.75 0.50	_	 1.00
296341 Freetown, mucky peat	 100 	Wetness	 0.75 0.50	•	 0.75 0.50	•	 0.50
296342 Paupack, mucky peat (shallow)		Wetness	 0.75 0.50	•	 0.75 0.50		 0.50 0.50
296343 Oquaga	 50 	 Well suited 	 	·	 0.50 0.50	•	 0.10

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		Suitability fo: mechanical plant		 Soil rutting haz 	ard
	unit			Rating class and limiting features 		Rating class and limiting features	
296343 Lackawanna	 35 	 Well suited 	 	 Moderately suited Rock fragments Slope			 0.10
296344 Oquaga	 55 	 Well suited 	 	-		 Slight Strength 	 0.10
Lackawanna	 30 	 Well suited 	 	-		 Slight Strength 	 0.10
296346	 	 		 	 	! 	
Oquaga	50 	-		-		Slight Strength 	 0.10
Lackawanna	35 			Poorly suited Rock fragments	•	Moderate Low strength	 0.50
296347 Oquaga	 60 		 0.50	Slope		 Slight Strength 	 0.10
Lackawanna	 30 		 0.50 	· =	•	 Moderate Low strength 	 0.50
296348 Philo	 85 	 Well suited 	 	 - Well suited - 	 	 Severe Low strength 	 1.00
296349 Pope	 90 	 Well suited 	 	 Well suited 	 	 Severe Low strength 	 1.00
296350 Pope	 90 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
296351 Rexford, somewhat poorly drained	 40 	 Well suited 	' 	 Well suited 	' 	 Severe Low strength	1 1.00
Rexford, poorly drained	 35 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
296355 Sheffield	 100 	 Well suited 	 	 Well suited 	 	 Severe Low strength 	 1.00
296363 Dystrochrepts, very stony	 85 		 0.50 	•	 1.00 0.50		 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		 Suitability fo mechanical plant		 Soil rutting haz 	ard
	unit unit 	· 		Rating class and limiting features		Rating class and limiting features	
296369 Wayland	 100 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
296376 Wellsboro	 80 	 Well suited 	 	Rock fragments	•	 Severe Low strength 	 1.00
296379 Wellsboro	 85 	- <u>-</u>	 0.50 	•	 0.75 0.75	•	 1.00
296385 Wyoming	 85 	 Well suited 	! 		•	 Moderate Low strength	10.50
296386 Wyoming	 85 	 Well suited 	 	•	 0.50 0.50	•	 0.50
296387 Wyoming	 85 	 Well suited 	 	•	 0.50 0.50	•	 0.50
296388 Wyoming	 85 	 Well suited 	 	•	•	 Moderate Low strength 	 0.50
296389 Wyoming	 100 	· -	 0.50	•	 1.00 0.50	•	 0.50
296390 Water	 100	 Not rated 	 	 Not rated 	 	 Not rated 	
297185 Edgemere	 42 			Rock fragments	1.00 0.50	 Moderate Low strength 	 0.50
Shohola	 42 		 1.00	Rock fragments		 Moderate Low strength 	 0.50
297186 Edgemere	 75 			 Unsuited Rock fragments 		 Moderate Low strength 	 0.50
297188 Manlius	 40 	 - Poorly suited Rock fragments 	 0.75 	•	1.00 0.75	•	 0.10

Table 6a.--Land Management, Part I (Planting)--Continued

		 		 		 	
	 Pct. of map			 Suitability fo mechanical plant		Soil rutting hazard	
	-	1 		Rating class and limiting features		Rating class and limiting features	
297188 Arnot	 35 	-	•	 Unsuited Rock fragments Slope	•	•	 1.00
Rock outcrop	1 15	 Not rated 		 Not rated 	! 	 Not rated 	
297189 Manlius		Rock fragments	0.75	•		 Slight Strength 	 0.10
Arnot		Rock fragments	0.75	Slope	•	 Severe Low strength 	 1.00
Rock outcrop	 15 	 Not rated 	į	 Not rated 	! !	 Not rated 	
297190 Braceville	 82 	 Well suited 	 	 Well suited 	 	 Moderate Low strength 	 0.50
297191 Wyalusing	 85 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
297192 Pope	 95 	 Well suited 	 	 Well suited 	! 	 Moderate Low strength	10.50
297193 Paupack	 90 	Wetness	 0.75 0.50	•	 0.75 0.50	•	 0.50 0.50
297196 Freetown	 94 	Wetness	 0.75 0.50	•	 0.75 0.50	•	 0.50
297197 Manlius	 90 	 Well suited 	 		 0.50 0.50		 0.10
297198 Manlius	 86 	 Well suited 	 	Rock fragments	 0.50	•	 0.10
297201 Oquaga	 75 	_	 0.50	-	 0.75 0.75	•	 0.50
297203 Delaware	 93 	 Well suited 	 	 Well suited 	 	 Severe Low strength 	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	ard
	-	· 		 Rating class and limiting features 		 Rating class and limiting features 	
297204 Delaware	 82 	 Well suited 	 	 Moderately suited Slope		 Moderate Low strength	 0.50
297205 Delaware	 80 	 Well suited 	 	 Moderately suited Slope 	•	 Moderate Low strength 	 0.50
297209 Philo	 85 	 Well suited 	! 	 Well suited 	! 	 Severe Low strength	 1.00
297210 Barbour	 85 	 Well suited 	 	 Well suited 	 	 Severe Low strength 	 1.00
297216 Wurtsboro		- <u>-</u>			•	 Moderate Low strength	 0.50
297217 Wurtsboro		· •	 0.50	Rock fragments	•	 Moderate Low strength 	 0.50
297227 Arnot	 88 	·		Rock fragments		 Slight Strength 	 0.10
297228 Arnot	 85 	 Moderately suited Rock fragments 		Slope		 Slight Strength 	 0.10
297229 Wyoming	 90 	 Well suited 	 	-		 Moderate Low strength 	 0.50
297230 Wyoming	 90 	 Well suited 	 	-		 Moderate Low strength 	 0.50
297231 Wyoming	 90 	 Well suited 	 	·	 0.75 0.50	•	 0.50
297236 Suncook	 91 	 Well suited 	 	 Well suited 	 	 Moderate Low strength	 0.50
297237 Mardin	 85 	 Well suited 	 	 Moderately suited Rock fragments 	 0.50	 Moderate Low strength 	 0.50

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		 Suitability fo mechanical plant		 Soil rutting haz 	ard
	-	· 		Rating class and limiting features 		 Rating class and limiting features 	
297238 Mardin	 85 	 Well suited 	 	•		 Moderate Low strength 	 0.50
297239 Mardin	 85 	- <u>-</u>		 Poorly suited Rock fragments	•	 Moderate Low strength	 0.50
297240 Mardin	 85 	- <u>-</u>	 0.50 	•	•	 Moderate Low strength 	 0.50
297241 Unadilla	 90 	 Well suited 	 	 Well suited 	 	 Severe Low strength	1 1.00
297242 Shohola	 62 	•	•	 Unsuited Rock fragments	•	 Moderate Low strength	 0.50
Edgemere	 29 	- <u>-</u>			•	 Moderate Low strength	 0.50
297243 Shohola	 62 	 Unsuited Rock fragments 	•	·	•	 Moderate Low strength 	 0.50
Edgemere	 29 	- <u>-</u>		Rock fragments	•	 Moderate Low strength 	 0.50
297244 Lordstown	 40 				•	 Severe Low strength	 1.00
Swartswood	 35 	- <u>-</u>	•		•	 Moderate Low strength	 0.50
297247 Chenango	 86 	 Well suited 	! 	 Moderately suited Rock fragments	 0.50	 Moderate Low strength	10.50
297248 Chenango	 85 	 Well suited 	 	•	 0.50 0.50	•	 0.50
297249 Chenango	 90 	 Well suited 	 	•	 0.75 0.50	•	 0.50
297253 Craigsville	 50 	· · · · · · · · · · · · · · · · · · ·	 0.50	 Poorly suited Rock fragments 	 0.75	 Moderate Low strength 	 0.50

Table 6a.--Land Management, Part I (Planting)--Continued

	Pct. of map	hand planting		Suitability fo mechanical plant		Soil rutting haz 	ard
	map unit 			Rating class and limiting features 		 Rating class and limiting features 	
297253 Wyoming	 40 	=	 0.50	 Poorly suited Rock fragments	 0.75	 Moderate Low strength	 0.50
297254 Pits, shale	 40	 Not rated	 	 Not rated	 	 Not rated	i !
Pits, gravel	40	 Not rated	İ	 Not rated	İ	 Not rated	i
298049 Wurtsboro, extremely stony	 90 	=	 0.50	 Poorly suited Rock fragments	 0.75	 Severe Low strength	 1.00
298050 Wurtsboro, extremely stony	 60 	 Moderately suited Rock fragments	 0.50	 Poorly suited Rock fragments	 0.75	 Severe Low strength	 1.00
Swartswood, extremely stony	 40 	 Moderately suited Rock fragments	 0.50	 Poorly suited Rock fragments	 0.75	 Severe Low strength	 1.00
298051 Wurtsboro, extremely stony	 60 	=	 0.50		 0.75 0.50	 Severe Low strength 	 1.00
Swartswood, extremely stony	 40 	· •	 0.50 		 0.75 0.50	 Severe Low strength	1 1.00
298075 Colonie	 80 	 Well suited 	 	 Moderately suited Slope 	 0.50	 Moderate Low strength 	 0.50
298188 Lackawanna, extremely stony	 85 	· -	 0.50 		 0.75 0.75	 Severe Low strength 	 1.00
298189 Lackawanna, extremely stony	 85 		 0.50	 Poorly suited Rock fragments Slope	 0.75 0.50	 Severe Low strength 	 1.00
298221 Swartswood, extremely stony	 90 	=	 0.50	 Poorly suited Rock fragments 	 0.75	 Severe Low strength 	 1.00
298222 Swartswood, extremely stony	 90 	=	 0.50 	•	 0.75 0.50	•	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of	hand planting		 Suitability fo mechanical plant		Soil rutting hazard	
	map unit 	· 		Rating class and limiting features 		 Rating class and limiting features 	
298223 Swartswood, extremely stony	 85 	 - Moderately suited Rock fragments 	 0.50	•	 0.75 0.75	•	
298255 Delaware, rarely flooded	 80 	 - Well suited 	 	•	 0.50	 Moderate Low strength	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
298256 Delaware, rarely flooded	 80 	 Well suited 	 	 Well suited 	' 	 Moderate Low strength	 0.50
298257 Wallpack	 85 	 Well suited 	 	•		 Severe Low strength	1 1.00
298258 Wallpack	 85 	 Well suited 	 	 Poorly suited Slope	•	 Severe Low strength	1 1.00
298259 Wallpack, extremely stony		 Moderately suited Rock fragments 	 0.50	 Poorly suited Rock fragments 	•	 Severe Low strength 	 1.00
298260 Wallpack, extremely stony		 Moderately suited Rock fragments 	 0.50	•	•	 Severe Low strength 	 1.00
298261 Wallpack	 85 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
298262 Wallpack, extremely stony		 Moderately suited Rock fragments 	 0.50			 Severe Low strength 	 1.00
298265 Venango, extremely stony	 90 	_	 0.50	 - Poorly suited Rock fragments	 0.75	 Severe Low strength	1 1 1 1 1 1 1 1 1 1
298266 Venango, extremely stony	 85 	=	 0.50	·	 0.75	•	1 1.00
298409 Swartswood, extremely stony	 90 		 0.50	 Poorly suited Rock fragments 	 0.75	 Severe Low strength 	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		-	 Suitability for mechanical planting		 Soil rutting hazard 	
	map unit 			Rating class and limiting features 		Rating class and limiting features 		
298411 Swartswood, extremely stony	 90 	_	 0.50	•	 0.75 0.50	•	 1.00	
298413 Swartswood, extremely stony	 85 	_	 0.50	•	 0.75 0.75	•	 1.00	
298461 Water	 100	 Not rated 	 	 Not rated	 	 Not rated 	 	
318498 Hazen, very stony	 60 	 Well suited 	 	_		 Severe Low strength 	 1.00	
Hoosic, very stony	 35 	_	 0.50	•		 Moderate Low strength 	 0.50	
318533 Hazen, very stony	 50 	 Well suited 	 	•		 Severe Low strength 	 1.00	
Hoosic, very stony	40 	_		•	•	Moderate Low strength	10.50	
319783 Catden	' 85 	 Well suited 	 	, Well suited 	 	 Severe Low strength 	 1.00	
319784 Fredon, very stony	 50 	 Well suited 	 	 Moderately suited Rock fragments	 0.50	 Severe Low strength	 1.00	
Halsey, very stony	 40 	 Well suited 	 	 Moderately suited Rock fragments	•	 Severe Low strength	 1.00	
543222 Andover, extremely stony	 55 	 Moderately suited Rock fragments		 Poorly suited Rock fragments	•	 Severe Low strength	 1.00	
Buchanan, extremely stony		 Moderately suited Rock fragments		 Poorly suited Rock fragments	•	 Moderate Low strength	1 10.50	
543243 Berks	 65 	_	 0.50	_	•	 Moderate Low strength 	 0.50	
Weikert	 25 	_	 0.50 	Rock fragments	 1.00 0.50	•	 0.10 	

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	ard
	map unit 	· 		Rating class and limiting features 		Rating class and limiting features 	
543246 Buchanan	 75 	 Well suited 	 	•		 Moderate Low strength 	 0.50
543247 Buchanan, extremely stony	80	 Moderately suited Rock fragments		 Poorly suited Rock fragments	•	 Moderate Low strength	 0.50
543257 Chippewa	 90 	 Well suited 	 	 Moderately suited Rock fragments 		 - Severe Low strength 	 1.00
543258 Chippewa	 90 	 Well suited 	 	•		 Severe Low strength 	 1.00
543259 Chippewa, extremely stony		 Moderately suited Rock fragments	 0.50	•	•	 Moderate Low strength	 0.50
543271 Delaware	 90 	 Well suited 	 	 Well suited 	 	 Moderate Low strength	 0.50
543276 Fluvaquents	 85 	 Well suited 	 	 Well suited 	 	 Moderate Low strength	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
543292 Hazleton, extremely stony		 - Moderately suited Rock fragments -	 0.50	Rock fragments	 0.75 0.75	•	 0.10
543293 Hazleton, extremely stony			 0.50		 1.00 0.75		 0.10
543299 Laidig, extremely stony	 90 	 Moderately suited Rock fragments 	 0.50	 Poorly suited Rock fragments 	 0.75	 Moderate Low strength 	 0.50
543300 Laidig, extremely stony	 90 	 Moderately suited Rock fragments 	 0.50	 Poorly suited Slope Rock fragments	 0.75 0.75	•	 0.50
543304 Laidig	 50 	Rock fragments	 0.50 0.50	•	 1.00 0.75	•	 0.50

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	Pct.	hand planting		 Suitability fo mechanical plant		 Soil rutting hazard 		
	map unit 	· 		 Rating class and limiting features 		 Rating class and limiting features 		
543304 Rubble land	 40 	Sandiness Rock fragments	 0.50 0.50 0.50	Slope	 1.00 1.00 0.50	İ	 0.10	
543318 Rubble land	 75 	Slope Sandiness	 0.50 0.50 0.50	Slope	 1.00 1.00 0.50	ĺ	 0.10 	
543327 Swartswood	 90 	 Well suited 	 	•	 0.50 0.50	•	 0.50	
543328 Swartswood	 90 	 Well suited 	 	•	 0.50 0.50	•	 0.50	
543330 Swartswood, extremely stony	 50 	 Moderately suited Rock fragments 	 0.50	 - - Poorly suited Rock fragments 	 0.75	 Moderate Low strength 	 0.50	
Wurtsboro, extremely stony	 30 	 Moderately suited Rock fragments	 0.50	 Poorly suited Rock fragments	 0.75	 Moderate Low strength	 0.50	
543331 Swartswood, extremely stony	 50 	_	 0.50	•	 0.75 0.75	 Moderate Low strength 	 0.50	
Wurtsboro, extremely stony	 30 	•	 0.50	•	 0.75 0.75	•	 0.50	
543359 Volusia	 85 	 Well suited 	! 	•	 0.50 0.50	•	 1.00	
543360 Volusia, extremely stony	 85 	· -	 0.50	 - - Poorly suited Rock fragments -	 0.75	 Severe Low strength 	 1.00	
543374 Wurtsboro	 90 	 Well suited 	 	 Moderately suited Slope	 0.50	 Moderate Low strength	 0.50	
543375 Wurtsboro	 90 	 Well suited 	! 	Slope	 0.50	 Moderate Low strength 	 0.50	

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		Suitability fo: mechanical plant.		 Soil rutting haz 	ard
	map unit 			Rating class and limiting features 		Rating class and limiting features 	
612280 Scio	 80 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
612666 Colonie	 80 	 Well suited 	 	 Well suited 	 	 Moderate Low strength	 0.50
612668 Hoosic, very stony	 60 		 0.50	•		 Moderate Low strength 	 0.50
Hazen, very stony	 30 	 Well suited 	 	Slope	 0.50 0.50	•	 1.00
612724 Lordstown, very rocky	 50 	 Moderately suited Rock fragments 	 0.50	•		 Severe Low strength 	 1.00
Wallpack, very rocky	 40 	·	 0.50 	Slope	 0.75 0.75	•	 1.00
612732 Atherton, very poorly drained	 60 	-	 0.75	 Poorly suited Wetness	 0.75	 Severe Low strength	 1.00
Atherton, poorly drained	 30 	 Well suited 	! 	 Well suited 	 	 Severe Low strength	 1.00
612738 Fluvaquents, occasionally flooded	 90 	 Moderately suited Stickiness; high plasticity index	0.50	 Moderately suited Stickiness; high plasticity index	0.50	 Severe Low strength 	 1.00
612753 Wallpack, aeolian mantle, very stony-	 85 	 Well suited 	 	•	 0.50 0.50	•	 0.50
612756 Wallpack, aeolian mantle, very stony-	 85 	 Well suited 	 	 Moderately suited Rock fragments	 0.50	 Moderate Low strength	 0.50
612757 Wallpack, aeolian mantle, very stony-	 85 	 Well suited 	 	Rock fragments	 0.75 0.50	•	 0.50

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		 Suitability fo mechanical plant		 Soil rutting haz 	zard
	map unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features 		 Rating class and limiting features 	
612767 Wellsboro, extremely stony	 85 	 Moderately suited Rock fragments 	 0.50	•	 0.75	•	 1.00
612768 Wellsboro, extremely stony		 Moderately suited Rock fragments 		 Poorly suited Rock fragments 	 0.75	 Severe Low strength 	 1.00
613393 Alden, extremely stony	 90 	 Moderately suited Rock fragments 		 - Poorly suited Rock fragments	 0.75	 Severe Low strength	 1.00
613447 Unadilla	, 85 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
613448 Unadilla	 85 	 Well suited 	 	 Moderately suited Slope	 0.50	 Severe Low strength	 1.00
614075 Wurtsboro, extremely stony	 80 	_	 0.50	Slope	 0.75	•	 1.00
Swartswood, extremely stony	 20 	- <u>-</u>	 0.50	· -	 0.75	•	 1.00
620179 Arnot, very rocky	 55 	·	 0.75	•	 1.00 0.50	•	 1.00
Lordstown, very rocky	 40 	=	 0.75	Rock fragments		 Severe Low strength 	 1.00
620180 Arnot	 45 	=	 0.75 	Slope	1.00 0.75	 Severe Low strength 	 1.00
Lordstown	 40 	=	 0.75 	Unsuited Rock fragments	İ	 Severe Low strength 	 1.00
Rock outcrop	 15	 Not rated 		 Not rated		 Not rated 	1
620181 Arnot	 60 	Rock fragments	0.75 0.50	Rock fragments	11.00	_	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		 Suitability fo mechanical plant		Soil rutting hazard 		
	map unit 	· 		Rating class and limiting features 		Rating class and limiting features 		
620181 Lordstown	 25 	Rock fragments		•		 Severe Low strength 	 1.00	
Rock outcrop	 15	 Not rated	!	 Not rated	! !	 Not rated	!	
623089 Chippewa, extremely stony	80	 Moderately suited Rock fragments 		 Poorly suited Rock fragments 	•	 Severe Low strength 	 1.00	
623109 Farmington		-	 0.75	•	•	•	 1.00	
Rock outcrop	 40 :	 Not rated	 	 Not rated	 	 Not rated	1	
624811 Galway, very rocky	 80 	Rock fragments		•	 1.00 1.00	•	 1.00	
624813 Lackawanna, extremely stony	 85 	 Moderately suited Rock fragments		_	•	 Severe Low strength	1 1 1 1 1 1 1 1 1 1	
624816 Lordstown, very rocky		 Moderately suited Rock fragments 		Rock fragments	•	 Severe Low strength 	 1.00	
Wallpack, very rocky		 Moderately suited Rock fragments 	•	Rock fragments		 Severe Low strength 	 1.00	
624822 Lordstown	 50 	 Well suited 	 	_	•	 Severe Low strength 	 1.00	
Wallpack	I 35 	 Well suited 	 	-	 0.75	 Severe Low strength	 1.00	
624823 Lordstown	 50 	 Well suited 	 	·		 Severe Low strength 	 1.00	
Wallpack	 35 	 Well suited 	 	 Moderately suited Slope	 0.50	 Severe Low strength	 1.00	
624824 Lordstown	 50 	 Well suited 	 	 Moderately suited Rock fragments		 Severe Low strength	 1.00	
Wallpack	 35 	 Well suited 	! 	 Well suited 	 	 Severe Low strength	1 1.00	

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	Pct. Of map	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	zard
	map unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
624826 Manlius, very rocky-	 60 	Slope	 0.50 0.50		•	 Moderate Low strength 	 0.50
Nassau, very rocky	 25 	Slope	 0.50 0.50	•	 1.00 1.00		 0.50
624827 Nassau, very rocky	, 55 		 0.50	 - Unsuited Rock fragments 	 1.00	 Severe Low strength 	 1.00
Manlius, very rocky-		-	•	Unsuited Rock fragments	11.00	Severe Low strength	11.00
624828 Nassau, very rocky	 55 	-	 0.50	 Unsuited Rock fragments Slope	•	 Severe Low strength 	 1.00
Manlius, very rocky-	 44 		 0.50 	 Unsuited Rock fragments Slope	 1.00 0.50		 1.00
624829 Nassau, very rocky	 55 		 0.50	•	•	 Severe Low strength 	 1.00
Manlius, very rocky-	 44 	-	 0.50 	 Unsuited Rock fragments Slope	 1.00 0.75		 1.00
624832 Nassau	 50 	Slope	 0.50 0.50	•	•	 Moderate Low strength 	 0.50
Rock outcrop	 45 	 Not rated 	 	 Not rated 	 	 Not rated 	
624841 Oquaga	 60 	Slope	 0.50 0.50	· •	 1.00 0.75	•	 1.00
Rock outcrop	 25 	 Not rated 	 	 Not rated 	 	 Not rated 	
624845 Rock outcrop	 45	 Not rated	! !	 Not rated	 	 Not rated	
Farmington	 35 	_	 0.50	•	 0.75 0.75	•	 1.00
Galway	 20 	·	 0.50 	•	 0.75 0.75	•	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	Pct. Of	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	zard
	map unit 			 Rating class and limiting features 		 Rating class and limiting features 	
624846 Rock outcrop	 40	 Not rated 	 	 Not rated 	 	 Not rated 	
Arnot	30 	Rock fragments	 0.75 0.50	•	 1.00 1.00	•	 1.00
Rubble land	 20 	Rock fragments Slope	 1.00 0.50 0.50	Rock fragments	 1.00 1.00 0.50	i I	
626816 Udifluvents, occasionally flooded	 90	 Well suited	' 	 Well suited	' 	 - - Moderate	
	 	i I	l I	 	l I	Low strength	0.50
635458 Oquaga, very rocky	 55 	· •	 0.50 	•	 0.75 0.50	•	 1.00
Lackawanna, very	 30 	 Moderately suited Rock fragments 	 0.50	•	 0.75 0.50	•	 1.00
635459 Oquaga, very rocky	 50 	=	 0.50 	•	 0.75 0.75	•	 1.00
Lackawanna, very rocky	 35 	 Moderately suited Rock fragments 	 0.50 	•	 0.75 0.75	•	 1.00
740953 Delaware, rarely flooded	 80 	 Well suited 	 	 Well suited 	 	 Moderate Low strength	 0.50
740968 Nassau, very rocky	 55 	_	 0.50	•	 1.00 0.50	•	 1.00
Manlius, very rocky-	 44 	_	 0.50 	•	 1.00 0.50	•	 1.00
740969 Nassau, very rocky	 55 	=	 0.50	•	 1.00 0.75	•	 1.00
Manlius, very rocky-	 44 	_	 0.50 	Slope	1.00 0.75	•	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		 Suitability fo mechanical plant 		 Soil rutting haz 	ard
	-	· 		Rating class and limiting features		Rating class and limiting features	
740971 Oquaga, very rocky	 55 	 Moderately suited Rock fragments 			 0.75 0.50	•	 1.00
Lackawanna, very rocky	 30 	 Moderately suited Rock fragments 		_	 0.75 0.50	•	 1.00
740972 Oquaga, very rocky	 50 	 Moderately suited Rock fragments		•	•	 Severe Low strength 	 1.00
Lackawanna, very rocky		 Moderately suited Rock fragments		•	 0.75 0.75	•	 1.00
740974 Oquaga	 60 	Slope	0.50	•	 1.00 0.75	•	 1.00
Rock outcrop	l 25	 Not rated	! !	 Not rated	! !	 Not rated	!
740975 Rock outcrop	 40 	 Not rated 	 	 Not rated 	 	 Not rated 	
Arnot	30 	Rock fragments	 0.75 0.50	•	•	Severe Low strength 	 1.00
Rubble land	 20 	Rock fragments Slope		Rock fragments	 1.00 1.00 0.50	ĺ	
740987 Scio	 80 	 Well suited 	 	 Well suited 	 	 Severe Low strength 	 1.00
740988 Udifluvents, occasionally flooded	 90 	 Well suited 	 	 - - Well suited - 	 	 - - Moderate Low strength 	 0.50
740991 Unadilla	 85 	 Well suited 	 	 Well suited 	 	 Severe Low strength	 1.00
740992 Unadilla	 85 	 Well suited 	 	 Moderately suited Slope 	 0.50 	 Severe Low strength 	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		 Suitability fo mechanical plant		 Soil rutting haz 	ard
	unit 			Rating class and limiting features		Rating class and limiting features	
740995 Wellsboro, extremely stony	 85 	 Moderately suited Rock fragments	 0.50	 Poorly suited Rock fragments	 0.75	 Severe Low strength	 1.00
740996 Wellsboro, extremely stony	 85 	 Moderately suited Rock fragments 		=	•	 Severe Low strength 	 1.00
741149 Lackawanna, extremely stony	 85 	 Moderately suited Rock fragments 	 0.50	·	 0.75	•	 1.00
741150 Lackawanna, extremely stony	 85 	 Moderately suited Rock fragments 	 0.50	•		 Severe Low strength 	 1.00
801114 Oquaga	 75 	 Moderately suited Rock fragments 		Rock fragments	•	 Severe Low strength 	 1.00
Rock outcrop	1 15	 Not rated	 	 Not rated	 	 Not rated	!
810906 Oquaga	 75 	 Moderately suited Rock fragments 		•	•	 Severe Low strength 	 1.00
Rock outcrop	1 15	 Not rated -	! !	 Not rated	! !	 Not rated	!
1147465 Alden, extremely stony	 90 	 Moderately suited Rock fragments 	•	 Poorly suited Rock fragments	•	 Severe Low strength 	 1.00
1147467 Arnot, very rocky	 55 	_	 0.75 	•	 1.00 0.50	•	 1.00
Lordstown, very rocky	 40 	•	 0.75 	•	 1.00 0.50	•	1 1.00
1147468 Arnot	 45 	•	 0.75 	Slope	 1.00 0.75	•	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	Pct.	hand planting		Suitability fo mechanical plant		Soil rutting hazard 		
	map unit 	· 		 Rating class and limiting features 		 Rating class and limiting features 		
1147468 Lordstown		-		 Unsuited Rock fragments Slope	•	•	 1.00	
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 		
1147469 Arnot		Rock fragments	0.75	•	1.00 1.00		 1.00	
Lordstown		Rock fragments	0.75	•	i	 Severe Low strength 	1 1.00	
Rock outcrop	 15 	 Not rated 	! !	 Not rated 	 	 Not rated 		
1147470 Atherton, very poorly drained		-	•	 Poorly suited Wetness 	•	 Severe Low strength 	 1.00	
Atherton, poorly drained	 30 	 Well suited 	 	 Well suited 	 	 Severe Low strength 	 1.00	
1147471 Catden	, 85 	 Well suited 	; 	 Well suited 	 	 Severe Low strength	 1.00	
1147474 Chippewa, extremely stony		 Moderately suited Rock fragments 		 Poorly suited Rock fragments 	•	 Severe Low strength 	 1.00	
1147475 Colonie	 80	 Well suited 	 	 Well suited 		 Moderate Low strength	 0.50	
1147478 Delaware, rarely flooded	 80 	 Well suited 	 	 Moderately suited Slope	 0.50	 Moderate Low strength	 0.50	
1147482 Fredon, very stony	 50 	 Well suited 	 	 Moderately suited Rock fragments	 0.50	 Severe Low strength	 1.00	
Halsey, very stony	 40 	 Well suited 	 	 Moderately suited Rock fragments	 0.50	 Severe Low strength	 1.00	
1147485 Hazen, very stony	 60 	 Well suited 	 	•	 0.50		 1.00	
Hoosic, very stony	 35 	——————————————————————————————————————	 0.50 	Rock fragments Slope	0.50 0.50	•	 0.50	

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of	hand planting		Suitability fo mechanical plant		 Soil rutting haz 	ard
	map unit 			 Rating class and limiting features 		Rating class and limiting features 	
1147490 Hoosic, very stony	 60 	-	 0.50	Rock fragments	•	 Moderate Low strength 	 0.50
Hazen, very stony	 30 	 Well suited 	 	Slope	 0.50 0.50		 1.00
1147491 Hoosic, very stony	 50 	Slope	 0.50 0.50	•	 1.00 0.50		 0.50
Otisville, very stony	 40 	Sandiness	 0.50 0.50	Rock fragments	 1.00 0.50 0.50	i	 0.50
1147492 Lackawanna, extremely stony	 85 	 Moderately suited Rock fragments 	 0.50	 Poorly suited Rock fragments 	 0.75	 Severe Low strength 	 1.00
1147500 Wurtsboro, extremely stony	 90 	 Moderately suited Rock fragments 	 0.50	 Poorly suited Rock fragments 	 0.75	 Severe Low strength 	 1.00
1147501 Wurtsboro, extremely stony	 60 	 Moderately suited Rock fragments 	 0.50	 Poorly suited Rock fragments 	 0.75 	 Severe Low strength 	 1.00
Swartswood, extremely stony	 40 	·	 0.50 	 Poorly suited Rock fragments 	 0.75 	 Severe Low strength 	 1.00
1147502 Wurtsboro, extremely stony	 60 	 Moderately suited Rock fragments 		Rock fragments	 0.75	=	 1.00
Swartswood, extremely stony	 40 		 0.50 		 0.75 0.50	•	 1.00
1147527 Udorthents	 60 	 Well suited 	 	 Well suited 	 	 Severe Low strength	1 1 1 1 1 1 1 1 1 1
Urban land	 40 	 Not rated 	 	 Not rated 	 	 Not rated 	
1147532 Udorthents	 100 	 Well suited 	 	 - Well suited - 	 	 Severe Low strength 	 1.00

Table 6a.--Land Management, Part I (Planting)--Continued

and soil name	 Pct. of map	hand planting		·	Suitability for mechanical planting		zard
	map unit 			 Rating class and limiting features 		 Rating class and limiting features 	
1147533 Wurtsboro, extremely stony	 80 	 Moderately suited Rock fragments 	 0.50	Slope	•	 Severe Low strength 	 1.00
Swartswood, extremely stony	 20 	 Moderately suited Rock fragments 		Slope	•	 Severe Low strength 	 1.00
1948749 Arnot	 90 	 Well suited 	' 	 Moderately suited Rock fragments Slope		Strength	 0.10
1948750 Arnot	 90 	 Well suited 	 	 Moderately suited Rock fragments Slope			 0.10
1948751 Arnot	 90 	 Well suited 	 	Slope	 0.75 0.50	•	 0.10
1948774 Conotton	 90 	 Well suited 	 	 Moderately suited Rock fragments Slope		Low strength	 0.50
1948775 Conotton	 95 	 Well suited 	 	 Moderately suited Rock fragments Slope		Low strength	 0.50
1948776 Conotton	 95 	 Well suited 	 	Slope	•	 Moderate Low strength 	 0.50
1948777 Conotton	 95 	- <u>-</u>	 0.50 	-	 1.00 0.50	•	 0.50
1948797 Manlius	 90 	 Well suited 	 	•	 0.50 0.50		 0.10
1948802 Manlius	 90 	 Well suited 	 	Rock fragments	 0.50 0.50	•	 0.10
1948818 Manlius	 90 	 Well suited 	 	Rock fragments	 0.75 0.50	•	 0.10

Soil Survey of Delaware Water Gap National Recreation Area

Table 6a.--Land Management, Part I (Planting)--Continued

	of	hand planting	Suitability for hand planting		Suitability for mechanical planting		ard
•	map unit	Rating class and		•		•	Value
	l I	limiting features 	 	limiting features 	 	limiting features 	
948832	 	 	 	 	 	 	1
Penargyl	I 90	 Well suited	i	Moderately suited	i	Moderate	i
31	İ	İ	į	Slope	0.50	Low strength	0.50
948846	 	 		 		 	
Phelps	90	Well suited	1	Moderately suited	1	Moderate	1
	I	I	1	Slope	0.50	Low strength	10.50
	 	 	1	Rock fragments	10.50] !	1
948855	! 	 	i	 	i	! 	
Udorthents, loamy	95	Well suited	1	Well suited	1	Severe	1
	 		1	 -	1	Low strength	1.00
948989	! 	! 	i	! 	i	 	
Urban land	65	Not rated	!	Not rated	1	Not rated	!
Delaware	ı 25	 Well suited		 Well suited		 Moderate	
	I	I	1	l	1	Low strength	10.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

	 Pct. of map	i I	on	Hazard of erosion		 Suitability for r (natural surfac	
	map unit 	· — — — — — — — — — — — — — — — — — — —		 Rating class and limiting features 		 Rating class and limiting features 	
290836 Hoosic, very stony	 50 			 Severe Slope/erodibility		 Poorly suited Slope	
Otisville, very stony	 40 	 Severe Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Sandiness	 1.00 0.50
296265 Alden	 100 	 Slight 		 Slight 	 	 Poorly suited Low strength Ponding Wetness	 1.00 1.00 1.00
296269 Fluvents, (alluvial land)		 		 Slight 	; 	 Poorly suited Flooding Wetness	 1.00 0.50
296271 Alvira	 55 	 Slight 		 Moderate Slope/erodibility 			 0.50 0.50
Watson	 35 	 Slight		 Moderate Slope/erodibility 		Slope	
296272 Bath	 85 	 		 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50
296273 Bath	 85 	 Slight 		 Severe Slope/erodibility 		 Moderately suited Slope 	 0.50
296274 Bath	 85 	 Moderate Slope/erodibility		 Severe Slope/erodibility		 Poorly suited Slope	1 1.00
296275 Bath	 90 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Rock fragments Slope	 0.50 0.50
296276 Bath	 90 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 - Poorly suited Slope Rock fragments 	 1.00 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	i i		 Hazard of erosion roads and trai		 Suitability for roads (natural surface)		
	map unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features 		 Rating class and limiting features 		
296277 Benson	 55 	 Slight 	 	 Slight 	 	 Moderately suited Low strength	 0.50	
296278 Benson	 60 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Low strength	 1.00 0.50	
Rock outcrop	 20	 Not rated 	 	 Not rated	 	 Not rated 		
296279 Benson	 60 	 Severe Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Low strength	 1.00 0.50	
Rock outcrop	 25 	 Not rated 	! 	 Not rated 	! !	 Not rated 		
296280 Braceville	 90 	 Slight 	 	 Slight 	 	 Moderately suited Low strength	 0.50	
296281 Braceville	 90 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Low strength Slope	 0.50 0.50	
296283 Buchanan	 90 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Rock fragments Low strength	 0.50 0.50	
296288 Chippewa	 48 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Wetness Low strength	 1.00 0.50	
Norwich	 48 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Wetness Low strength 	 1.00 0.50	
296289 Chippewa	 47 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Wetness Rock fragments	 1.00 0.50	
Norwich	 47 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Wetness Rock fragments Low strength	 1.00 0.50 0.50	
296295 Udorthents, cut and fill		 	 	 Not rated 	 	 - Not rated 	 	
296297 Dekalb	 100 	 Moderate Slope/erodibility 	•	 Moderate Slope/erodibility 		 Poorly suited Slope Rock fragments 	 1.00 0.50	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	Pct. of map	l	n	Hazard of erosion roads and trai			Suitability for roads (natural surface)		
	map unit 	· 		 Rating class and limiting features 		 Rating class and limiting features 			
296298 Dekalb	 100 	 Very severe		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50		
296303 Hazleton	 100 			 Moderate Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50		
296304 Holly	 100 			 Slight 	 	 Poorly suited Flooding Wetness Low strength	 1.00 1.00 0.50		
296311 Lackawanna	40 	 Severe Slope/erodibility 		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments Low strength	 1.00 0.50 0.50		
Bath	 30 			 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50		
296312 Lackawanna	 80 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Low strength Slope	 0.50 0.50		
296313 Lackawanna	 80 	 Slight 		 Severe Slope/erodibility 		 Moderately suited Slope Low strength	 0.50 0.50		
296315 Lackawanna	 80 	 Slight 		 Moderate Slope/erodibility 	•	 Moderately suited Rock fragments Low strength Slope	 0.50 0.50 0.50		
296316 Lackawanna	80 	 Moderate Slope/erodibility 		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments Low strength	 1.00 0.50 0.50		
296317 Laidig	 100 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Rock fragments Low strength	 0.50 0.50		
296326 Lordstown	 85 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Rock fragments Low strength Slope 	 0.50 0.50 0.50		

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	Pct. of map	l	on	Hazard of erosion roads and trai		Suitability for roads (natural surface)		
	map unit 	· 		Rating class and limiting features 		 Rating class and limiting features 		
296327 Lordstown	 85 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		Rock fragments	 1.00 0.50 0.50	
296328 Lordstown	 40 	•	•	 Severe Slope/erodibility 		Rock fragments	 1.00 0.50 0.50	
Oquaga	 35 	 Severe Slope/erodibility 	•	 Severe Slope/erodibility 		· •	 1.00 0.50	
296329 Mardin	 85 	 Slight 	 	 Moderate Slope/erodibility 			 0.50 0.50	
296330 Mardin	 85 	 Slight 	 	 Severe Slope/erodibility 		_	 0.50	
296331 Mardin	 85 	 Slight 	 	 Moderate Slope/erodibility 		Low strength	 0.50 0.50 0.50	
296332 Mardin	 87 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		Wetness	 1.00 0.50 0.50	
296335 Meckesville	 100 	 Slight 	 	 Moderate Slope/erodibility 	•	 Moderately suited Slope Low strength	 0.50 0.50	
296337 Meckesville	 100 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		_		
296338 Morris	 80 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Wetness Low strength Slope	 1.00 0.50 0.50	
296339 Morris	 75 	 Slight 	 	 - Moderate Slope/erodibility - 		 Poorly suited Wetness Rock fragments Low strength	 1.00 0.50 0.50	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	l	on	 Hazard of erosion roads and trai		 Suitability for r (natural surfac	
	map unit 			 Rating class and limiting features 		 Rating class and limiting features 	
296340 Morris	 80 81 1	 Slight 		 Severe Slope/erodibility 		Slope Rock fragments	 1.00 0.50 0.50
296341 Freetown, mucky peat	 100 	 Slight 	 	 Slight 	 	•	 1.00 1.00
296342 Paupack, mucky peat (shallow)		 Slight 	 	 Slight 	 	 - Poorly suited Ponding Wetness	 1.00 1.00
296343 Oquaga	 50 	 Slight 	 	 Moderate Slope/erodibility		 Moderately suited Slope	1 1 1 1 1 1 1 1 1 1
Lackawanna	 35 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Slope Stickiness; high plasticity index 	
296344 Oquaga	 55 	 Slight 	 	 Severe Slope/erodibility		 Moderately suited Slope	 0.50
Lackawanna	 30 	Slight 	 	 Severe Slope/erodibility 		 Moderately suited Slope Stickiness; high plasticity index	
296346 Oquaga	 50 	 Slight 	 	 Slight 	 	 Moderately suited Rock fragments	 0.50
Lackawanna	 35 	Slight - -	 	 Moderate Slope/erodibility 		 Moderately suited Rock fragments Low strength Stickiness; high plasticity index	
296347 Oquaga	 60 	 Moderate Slope/erodibility	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50
Lackawanna	 30 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		Rock fragments	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

Map unit symbol	 Pct.	 Hazard of erosi	on	 Hazard of erosion	n on	 Suitability for r	oads	
and soil name	of map	ĺ		roads and trail		(natural surface)		
	unit 	`		Rating class and limiting features		Rating class and limiting features		
296348 Philo	 85 	 Slight 	 	 Slight 		 Poorly suited Flooding Low strength	 1.00 0.50	
296349 Pope	 90 	 Slight 	 	 Slight 	 	 Poorly suited Flooding Low strength	 1.00 0.50	
296350 Pope	 90 	 Slight 	 	 Slight 	 	 Moderately suited Low strength 	 0.50	
296351 Rexford, somewhat poorly drained	 40 	 Slight 	 	 Slight 	 	 Poorly suited Wetness Low strength	 1.00 0.50	
Rexford, poorly drained	 35 	 Slight 	 	 Slight 	 	 Poorly suited Wetness Low strength	 1.00 0.50	
296355 Sheffield	 100 	 Slight 	 	 Slight 	 	 Poorly suited Ponding Wetness Low strength	 1.00 1.00 0.50	
296363 Dystrochrepts, very stony		 Very severe Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Low strength	 1.00 0.50	
296369 Wayland	 100 	 Slight 	 	 Slight 	 	 Poorly suited Ponding Flooding Wetness Low strength	 1.00 1.00 1.00	
296376 Wellsboro	 80 81	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Wetness Low strength Slope	 0.50 0.50	
296379 Wellsboro	 85 	 Moderate Slope/erodibility 	•	 - Severe Slope/erodibility - - -		 Poorly suited Slope Wetness Rock fragments Low strength	 1.00 0.50 0.50	
296385 Wyoming	 85 	 Slight 	 	 Slight 	 	 Well suited 	 	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	 Pct. of map	İ	on	 Hazard of erosion roads and trai:		 Suitability for m (natural surfac	
	map unit 	· — — — — — — — — — — — — — — — — — — —		 Rating class and limiting features 		 Rating class and limiting features 	
296386 Wyoming	 85 	 Slight 	 	 Slight 	 	 Moderately suited Slope 	 0.50
296387 Wyoming	, 85 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50
296388 Wyoming	 85 	 Moderate Slope/erodibility	•	 Moderate Slope/erodibility		 Poorly suited Slope	 1.00
296389 Wyoming	 100 		•	 - Severe Slope/erodibility 		 Poorly suited Slope 	1 1.00
296390 Water	 100 	 Not rated 	' 	 Not rated 	 	 Not rated 	
297185 Edgemere	 42 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Rock fragments Ponding Wetness Low strength Slope	 1.00 1.00 1.00 0.50
Shohola	 42 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Rock fragments Wetness Slope Low strength 	 1.00 0.50 0.50 0.50
297186 Edgemere	 75 	 Slight 	 	 Slight 	 	 Poorly suited Rock fragments Ponding Wetness Low strength	 1.00 1.00 1.00 0.50
297188 Manlius	 40 			 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
Arnot	 35 	 Moderate Slope/erodibility 		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments Low strength	 1.00 1.00 0.50
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	
297189 Manlius	 40 	 Very severe Slope/erodibility 		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments 	 1.00 1.00

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of	i i		•	 Hazard of erosion on roads and trails		Suitability for roads (natural surface)		
	map unit 	·———————		 Rating class and limiting features 		 Rating class and limiting features 			
297189 Arnot	 35 	 - Very severe Slope/erodibility 	•	 - Severe Slope/erodibility 		_	 1.00 1.00 0.50		
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	 		
297190 Braceville	 82 	 Slight 	 	 Slight 	 	 Moderately suited Wetness	 0.50		
297191 Wyalusing	 85 	 Slight 	 	 Slight 	 	 Poorly suited Flooding Wetness Low strength	 1.00 1.00 0.50		
297192 Pope	 95 	 Slight 	 	 Slight 	 	 Poorly suited Flooding	 1.00		
297193 Paupack	 90 	 Slight 	 	 Slight 	 	 Poorly suited Ponding Wetness	 1.00 1.00		
297196 Freetown	 94 	 Slight 	 	 Slight 	 	 Poorly suited Ponding Wetness	 1.00 1.00		
297197 Manlius	 90 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Rock fragments Slope	 0.50 0.50		
297198 Manlius	 86 	 Slight 	 	 Severe Slope/erodibility 		 Moderately suited Slope Rock fragments	 0.50 0.50		
297201 Oquaga	 75 	 Moderate Slope/erodibility 	•	 Moderate Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00		
297203 Delaware	 93 	 Slight 	 	 Slight 	 	 Moderately suited Low strength	 0.50		
297204 Delaware	 82 	 Slight 	 	 Moderate Slope/erodibility		 Moderately suited Slope	 0.50		
297205 Delaware	 80 	 Slight 	 	 Severe Slope/erodibility 		 Poorly suited Slope 	 1.00		

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	I	n	 Hazard of erosion roads and trail		-	Suitability for roads (natural surface)		
	map unit 			Rating class and limiting features		Rating class and limiting features			
297209 Philo	 85 			 Slight 		 Poorly suited Flooding Low strength	 1.00 0.50		
297210 Barbour	 85 			 Slight 	 	 Poorly suited Flooding Low strength	 1.00 0.50		
297216 Wurtsboro	 92 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Rock fragments Wetness	 0.50 0.50		
297217 Wurtsboro	 88 	 Slight 		 Severe Slope/erodibility 		 Moderately suited Slope Rock fragments Wetness	 0.50 0.50 0.50		
297227 Arnot	 88 			 Moderate Slope/erodibility		 Moderately suited Slope	 0.50		
297228 Arnot	' 85 			 Severe Slope/erodibility		 Poorly suited Slope	 1.00		
297229 Wyoming	 90 	 Slight 		 Slight 		 Well suited 	i 		
297230 Wyoming	 90 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50 		
297231 Wyoming	 90 	 Moderate		 Moderate Slope/erodibility 		 Poorly suited Slope 	 1.00		
297236 Suncook	 91 			 Slight 		 Poorly suited Flooding	 1.00		
297237 Mardin	' 85 	 Slight 		 Moderate Slope/erodibility		 Moderately suited Wetness	 0.50		
297238 Mardin	 85 	 		 Severe Slope/erodibility 		 Moderately suited Slope Wetness	 0.50 0.50		
297239 Mardin	 85 	 		 Moderate Slope/erodibility 		 Moderately suited Wetness Rock fragments 	 0.50 0.50		

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	Pct. Of map	l	on	Hazard of erosion roads and trai: 		 Suitability for r (natural surfac	
	map unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		 Rating class and limiting features	
297240 Mardin	 85 	 Slight 	——— 	 		 Moderately suited Slope Wetness Rock fragments	 0.50 0.50
297241 Unadilla	 90 	 Slight 	 	 Slight 	 	 Moderately suited Low strength	 0.50
297242 Shohola	 62 	 Slight 	 	 Slight 	 	 - Poorly suited Rock fragments Wetness Low strength	 1.00 0.50 0.50
Edgemere	 29 	 Slight 	 	 Slight 	 	 Poorly suited Ponding Wetness Rock fragments Low strength	 1.00 1.00 0.50 0.50
297243 Shohola	 62 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Rock fragments Slope Wetness	 1.00 0.50 0.50
Edgemere	 29 	 Slight 	 	 Moderate Slope/erodibility 		Low strength Poorly suited Ponding Wetness Slope Rock fragments Low strength	0.50 1.00 1.00 0.50 0.50
297244 Lordstown	 40 	 Slight 	 	 Slight 	 	 Moderately suited Rock fragments Low strength	 0.50 0.50
Swartswood	 35 	 Slight 	 	 Slight 	 	 Moderately suited Rock fragments	 0.50
297247 Chenango	 86	 Slight	 	 Slight	! 	 Well suited	
297248 Chenango	 85 	 - Slight - 	 	 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50
297249 Chenango	 90 	 - Moderate Slope/erodibility 		 - Severe Slope/erodibility 		 Poorly suited Slope 	1 1.00
297253 Craigsville	 50 	 Slight 	 	 	 	 - Poorly suited Flooding Rock fragments 	 1.00 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	 Pct. of map	İ	n	 Hazard of erosion roads and trai		 Suitability for roads (natural surface) 		
	-			 Rating class and limiting features 		 Rating class and limiting features 		
297253 Wyoming	 40 	 Slight 		 	 	 - Moderately suited Rock fragments	 0.50	
297254 Pits, shale	40			 Not rated	 	 Not rated	!	
Pits, gravel	 40 	 Not rated		 Not rated 	 	 Not rated 		
298049 Wurtsboro, extremely stony	 90 			 - - Moderate Slope/erodibility -		 - - Moderately suited Rock fragments Wetness	 0.50	
298050 Wurtsboro, extremely stony	 60 	 		 Moderate Slope/erodibility 		 Moderately suited Rock fragments Wetness	 0.50	
Swartswood, extremely stony	 40 	 Slight 		 Slight 	 	 Moderately suited Rock fragments	 0.50	
298051 Wurtsboro, extremely stony	 60 	 		 Severe Slope/erodibility 		 - Moderately suited Slope Rock fragments Wetness	 0.50 0.50	
Swartswood, extremely stony	 40 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments	 0.50 0.50	
298075 Colonie	 80 			 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50	
298188 Lackawanna, extremely stony	 85 	 		 Severe Slope/erodibility 		 - Poorly suited Slope Rock fragments Low strength	 1.00 0.50 0.50	
298189 Lackawanna, extremely stony	 85 			 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments Low strength	 0.50 0.50	
298221 Swartswood, extremely stony	 90 	 		 Slight 	 	 Moderately suited Rock fragments 	 0.50	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	Pct. Of map	l	on	Hazard of erosion roads and train		Suitability for roads (natural surface) 		
	unit 			Rating class and limiting features		Rating class and limiting features		
298222 Swartswood, extremely stony	 90 	 Slight 	 	 		 Moderately suited Slope Rock fragments	 0.50	
298223 Swartswood, extremely stony	 85 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 - Poorly suited Slope Rock fragments 	 1.00 0.50	
298255 Delaware, rarely flooded	 80 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50	
298256 Delaware, rarely flooded	 80	 Slight	 	 Slight	 	 Well suited	 	
298257 Wallpack	 85 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 Moderately suited Slope Low strength	 0.50 0.50	
298258 Wallpack	 85 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Low strength	 1.00 0.50	
298259 Wallpack, extremely stony		 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Rock fragments Low strength	 0.50	
298260 Wallpack, extremely stony		 Moderate Slope/erodibility 	•	 - Severe Slope/erodibility -		 Moderately suited Slope Rock fragments Low strength	 0.50 0.50	
298261 Wallpack	 85 	 Slight 	 	 Moderate Slope/erodibility		 Moderately suited Low strength	 0.50	
298262 Wallpack, extremely stony	 85 	 Moderate Slope/erodibility 	•	 - Severe Slope/erodibility - 		 - Poorly suited Slope Rock fragments Low strength	 1.00 0.50 0.50	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	 Pct. of map	l	on	 Hazard of erosion roads and trai		 Suitability for r (natural surfac	
	unit	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
298265 Venango, extremely stony	 90 	 	 	 		 - Poorly suited Wetness Rock fragments Low strength	 1.00 0.50 0.50
298266 Venango, extremely stony	 85 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Wetness Slope Rock fragments Low strength	 1.00 0.50 0.50 0.50
298409 Swartswood, extremely stony	 90 	 Slight 	 	 Slight 	 	 Moderately suited Rock fragments 	 0.50
298411 Swartswood, extremely stony	 90 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments 	 0.50 0.50
298413 Swartswood, extremely stony	 85 	 Moderate Slope/erodibility 	•	 - Severe Slope/erodibility -		 - Poorly suited Slope Rock fragments	 1.00 0.50
318498 Hazen, very stony	 60 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Low strength Slope	 0.50 0.50
Hoosic, very stony	 35 	 Slight 	 	 Slight 	 	 Moderately suited Slope	 0.50
318533 Hazen, very stony	 50 	 Slight 	 	 Slight 	 	 Moderately suited Low strength	 0.50
Hoosic, very stony	 40 	 Slight 	! 	 Slight 	 	 Well suited 	
319783 Catden	 85 	 Slight 	 	 Slight 	 	 Poorly suited Low strength Ponding Wetness 	 1.00 1.00 1.00
319784 Fredon, very stony	 50 	 Slight 	 	 Slight 	 	 Moderately suited Wetness Low strength	 0.50 0.50
Halsey, very stony	 40 	 Slight 	 	 Slight 	 	 Poorly suited Ponding Low strength 	 1.00 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	 Pct. of map	i i		 Hazard of erosion roads and trai		Suitability for roads (natural surface)		
	unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features		
543222 Andover, extremely stony	 55 	 Slight 	 	 		 - Poorly suited Wetness Rock fragments Low strength	 1.00 0.50 0.50	
Buchanan, extremely stony		 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Rock fragments Wetness	 0.50 0.50	
543243 Berks	 65 	 Severe Slope/erodibility	•	 Severe Slope/erodibility		 Poorly suited Slope	1 1.00	
Weikert	 25 	 Severe Slope/erodibility		 Severe Slope/erodibility	•	 Poorly suited Slope	1 1.00	
543246 Buchanan	 75 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Slope Wetness	 0.50 0.50	
543247 Buchanan, extremely stony		 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Rock fragments Wetness	 0.50 0.50	
543257 Chippewa	 90 	 Slight 	 	 Slight 	 	 Poorly suited Wetness Low strength	 1.00 0.50	
543258 Chippewa	 90 	 Slight 	 	 Moderate Slope/erodibility 		 Poorly suited Wetness Low strength	 1.00 0.50	
543259 Chippewa, extremely stony	 90 	 Slight 	 	 Slight 	 	 - Poorly suited Wetness Rock fragments	 1.00 0.50	
543271 Delaware	 90	 Slight 	 	 Slight 	 	 Well suited 	i 	
543276 Fluvaquents	 85 	 Slight 	 	 Slight 	 	 Poorly suited Flooding Wetness	 1.00 1.00	
543292 Hazleton, extremely stony		 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments 	 1.00 0.50	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	 Pct. of	İ	Hazard of erosion on roads and trails	Suitability for roads (natural surface)		
	map unit 			 Rating class and Value limiting features 		
543293 Hazleton, extremely stony		 				
543299 Laidig, extremely stony	 90 					
543300 Laidig, extremely stony	 90 	 Moderate Slope/erodibility 0.50 				
543304 Laidig	 50 	 				
Rubble land	 40 	 Very severe				
543318 Rubble land	 75 	 				
543327 Swartswood	 90 					
543328 Swartswood	 90 	 Slight 		 Moderately suited Slope 0.50		
543330 Swartswood, extremely stony	 50 	 Slight 		 		
Wurtsboro, extremely stony	30 			 Moderately suited		
543331 Swartswood, extremely stony	 50 	 				

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	İ	on	Hazard of erosion roads and trail		Suitability for roads (natural surface)		
	map unit 			Rating class and limiting features		Rating class and limiting features 		
543331 Wurtsboro, extremely stony	 30 	 	•	 	•	=		
543359 Volusia	 85 	 Slight 	 	 Moderate Slope/erodibility 			 0.50 0.50	
543360 Volusia, extremely stony	 85 	 	 	 - Moderate Slope/erodibility 		Rock fragments	 0.50 0.50 0.50	
543374 Wurtsboro	 90 	 Slight 	 	 Moderate Slope/erodibility 	•	 Moderately suited Slope 	 0.50	
543375 Wurtsboro	 90 	 Slight 	 	 Severe Slope/erodibility		 Moderately suited Slope	 0.50	
612280 Scio	 80 	 Slight 	 	 Slight 	 	•	 0.50 0.50	
612666 Colonie	 80 	 Slight 	 	 Slight 	 	 Well suited 	 	
612668 Hoosic, very stony	 60 	 Slight 	 	 Moderate Slope/erodibility		 Moderately suited Slope	 0.50	
Hazen, very stony	 30 	 Slight 	 	 Moderate Slope/erodibility 			 0.50 0.50	
612724 Lordstown, very rocky	 50 	 - - Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		•	 1.00 0.50	
Wallpack, very rocky	 40 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		Rock fragments	 1.00 0.50 0.50	
612732 Atherton, very poorly drained	 60 	 Slight 	 	 Slight 	 	 Poorly suited Low strength	 1.00 1.00	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	Pct.	l	on	Hazard of erosion		Suitability for roads (natural surface)		
	map unit 	· — — — — — — — — — — — — — — — — — — —		 Rating class and limiting features 		 Rating class and limiting features 		
612732 Atherton, poorly drained	 30 			 - Slight - 	 	 Poorly suited Wetness Low strength	 1.00 0.50	
612738 Fluvaquents, occasionally flooded	 90 	 		 Slight 	 	 - Poorly suited Flooding Wetness Low strength	 1.00 1.00 0.50	
612753 Wallpack, aeolian mantle, very stony-	 85 	 		 Severe Slope/erodibility 		 Moderately suited Slope	 0.50	
612756 Wallpack, aeolian mantle, very stony-	 85 	 		 Moderate Slope/erodibility 	•	 Well suited 	 	
612757 Wallpack, aeolian mantle, very stony-	 85 	 Moderate Slope/erodibility		 Severe Slope/erodibility		 Poorly suited Slope	 1.00	
612767 Wellsboro, extremely stony	 85 	 		 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments Low strength	 0.50 0.50	
612768 Wellsboro, extremely stony	 85 			 	 	 Moderately suited Rock fragments Low strength	 0.50 0.50	
613393 Alden, extremely stony	 90 			 Slight 	 	 Poorly suited Ponding Rock fragments Low strength	 1.00 0.50 0.50	
613447 Unadilla	 85 			 Slight 	 	 Moderately suited Low strength	 0.50	
613448 Unadilla	 85 			 Moderate Slope/erodibility 		 Moderately suited Low strength Slope 	 0.50 0.50	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	 Pct. of map	İ	on	 Hazard of erosion roads and train		 Suitability for r (natural surfac	
	map unit 	`		Rating class and limiting features		Rating class and limiting features	
614075 Wurtsboro, extremely stony	 	 		 		 - Poorly suited Slope Rock fragments Wetness	 1.00 0.50 0.50
Swartswood, extremely stony	 20 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 - Poorly suited Slope Rock fragments 	 1.00 0.50
620179 Arnot, very rocky	 55 	 Slight 	 	 Moderate Slope/erodibility 	•	 Poorly suited Rock fragments Slope	 1.00 0.50
Lordstown, very rocky	 40 	 Slight 	; 	 Moderate Slope/erodibility 		 Poorly suited Rock fragments Slope	 1.00 0.50
620180 Arnot	 45 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		=	 1.00 1.00
Lordstown	 40 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		=	 1.00 1.00
Rock outcrop	 15	 Not rated 	 	 Not rated	 	 Not rated 	
620181 Arnot	 60 	•	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
Lordstown	 25 	-		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
Rock outcrop	 15	 Not rated 	 	 Not rated	 	 Not rated 	
623089 Chippewa, extremely stony		 Slight 	 	 Slight 	; 	 Poorly suited Ponding Rock fragments Low strength	 1.00 0.50 0.50
623109 Farmington	 50 	 Slight 	 	 Moderate Slope/erodibility 		 - Poorly suited Rock fragments Slope Low strength	 1.00 0.50 0.50
Rock outcrop	 40 	 Not rated 	 	 Not rated 	 	 Not rated 	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	l	on	 Hazard of erosion roads and trai		 Suitability for r (natural surfac	
	map unit 			Rating class and limiting features		Rating class and limiting features	
624811 Galway, very rocky	 80 	 Severe Slope/erodibility 		 - Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
624813 Lackawanna, extremely stony	 85 	 		 - Slight - -	 	 Moderately suited Rock fragments Low strength	 0.50 0.50
624816 Lordstown, very rocky	 50 	 		 Severe Slope/erodibility 		 Moderately suited Slope Rock fragments	 0.50
Wallpack, very rocky	 35 	 Moderate Slope/erodibility 		 Severe Slope/erodibility 		 Moderately suited Slope Rock fragments Low strength	 0.50 0.50 0.50
624822 Lordstown	 50 	 Moderate Slope/erodibility		 Severe Slope/erodibility		 Poorly suited Slope	1 1.00
Wallpack	 35 			 Severe Slope/erodibility 		 Poorly suited Slope Low strength	 1.00 0.50
624823 Lordstown	 50 	 Moderate Slope/erodibility		 Severe Slope/erodibility		 Moderately suited Slope	 0.50
Wallpack	 35 			 Severe Slope/erodibility 		 Moderately suited Slope Low strength	 0.50 0.50
624824 Lordstown	 50 	 Slight		 Moderate Slope/erodibility	•	 Well suited 	
Wallpack	 35 			 Moderate Slope/erodibility 		 Moderately suited Low strength 	 0.50
624826 Manlius, very rocky-	 60 	 Severe Slope/erodibility 		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50
Nassau, very rocky	 25 	 Severe		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50
624827 Nassau, very rocky	 55 	 Slight		 	 	 - Moderately suited Rock fragments Low strength 	 0.50 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	İ	on	 Hazard of erosion roads and trai:		 Suitability for r (natural surfac	
	map unit 	· 		 Rating class and limiting features 		Rating class and limiting features	
624827 Manlius, very rocky-	 44 	 Slight 	 	 Slight 	 	 Moderately suited Rock fragments Low strength	 0.50 0.50
624828 Nassau, very rocky	' 55 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments Low strength	 0.50 0.50
Manlius, very rocky-	 44 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited	 0.50 0.50
624829 Nassau, very rocky	 55 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments Low strength	 1.00 0.50 0.50
Manlius, very rocky-	 44 		•	 Severe Slope/erodibility 		 Poorly suited	 1.00 0.50 0.50
624832 Nassau	 50 	 Severe Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50
Rock outcrop	 45 	 Not rated 	! !	 Not rated 	! 	 Not rated 	
624841 Oquaga	 60 	 Severe Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50
Rock outcrop	 25 	 Not rated 	! 	 Not rated 	! 	 Not rated 	
624845 Rock outcrop	 45	 Not rated	 	, Not rated	 	' Not rated	i i
Farmington	 35 	 Moderate Slope/erodibility 		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments Low strength	 1.00 0.50 0.50
Galway	 20 	 Moderate Slope/erodibility 		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments 	 1.00 0.50
624846 Rock outcrop	 40	 Not rated	 	 Not rated	 	 Not rated	
Arnot	 30 	_		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments 	 1.00 1.00

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	l	on	 Hazard of erosion roads and train		 Suitability for r (natural surfac 	
	map unit 	· 		Rating class and limiting features		Rating class and limiting features	
624846 Rubble land	 20 1 	 Very severe Slope/erodibility 	•	 Severe Slope/erodibility 		Rock fragments	
626816 Udifluvents, occasionally flooded	 90 	 Slight 		 	 	 Poorly suited Flooding	 1.00
635458 Oquaga, very rocky	 55 	 Slight 		 Moderate Slope/erodibility 		•	 0.50 0.50
Lackawanna, very rocky	 30 	 Slight 		 Moderate Slope/erodibility 		Rock fragments	 0.50 0.50
635459 Oquaga, very rocky	 50 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		=	 1.00 0.50
Lackawanna, very rocky	 35 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		Rock fragments	 1.00 0.50 0.50
740953 Delaware, rarely flooded	 80 	 Slight	 	 Slight 	 	 	
740968 Nassau, very rocky	 55 	 Slight 	 	 Moderate Slope/erodibility 		Rock fragments	 0.50 0.50 0.50
Manlius, very rocky-	 44 	 Slight 		 Moderate Slope/erodibility 		Rock fragments	 0.50 0.50 0.50
740969 Nassau, very rocky	 55 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		Rock fragments	 1.00 0.50 0.50
Manlius, very rocky-	 44 	 Moderate Slope/erodibility 		 Severe Slope/erodibility 		Rock fragments	 1.00 0.50 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	<u> </u>	<u> </u>		!			
	Pct. of map	l	on	Hazard of erosion roads and trai		Suitability for re (natural surface 	
	unit 			Rating class and limiting features		Rating class and limiting features	
740971 Oquaga, very rocky	 55 	 Slight 	 	 Moderate Slope/erodibility 		•	 0.50 0.50
Lackawanna, very rocky	 30 	 Slight 	 	 Moderate Slope/erodibility 		Rock fragments	 0.50 0.50
740972 Oquaga, very rocky	 50 	 Moderate Slope/erodibility 		 Severe Slope/erodibility 		=	 1.00 0.50
Lackawanna, very rocky	35 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		Rock fragments	 1.00 0.50 0.50
740974 Oquaga	 60 	 Severe Slope/erodibility 	•	 Severe Slope/erodibility 		=	 1.00 0.50
Rock outcrop	 25 	 Not rated 	! 	 Not rated 	! 	 Not rated 	
740975 Rock outcrop	 40 	 Not rated 	' 	 Not rated 	; 	 Not rated 	
Arnot	30 	Very severe Slope/erodibility 		Severe Slope/erodibility 		-	 1.00 1.00
Rubble land	 20 	 Very severe Slope/erodibility 		 Severe Slope/erodibility 		Rock fragments	
740987 Scio	 80 	 Slight 	 	 Slight 	 	·	 0.50 0.50
740988 Udifluvents, occasionally flooded	 90	 Slight 	 	 Slight 	 	 Poorly suited Flooding	 1.00
740991 Unadilla	 85 	 Slight 	 	 Slight 	 	 Moderately suited Low strength 	 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	ī	<u> </u>		I		<u> </u>	
	Pct. of map	l	on	Hazard of erosion roads and trail		Suitability for r (natural surfac	
	unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
740992 Unadilla	 85 			 Moderate Slope/erodibility 		 Moderately suited Low strength Slope	 0.50 0.50
740995 Wellsboro, extremely stony	 85 	 		 Slight 	 	 Moderately suited Rock fragments Low strength	 0.50
740996 Wellsboro, extremely stony	 85 	 Moderate Slope/erodibility 		 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments Low strength	 0.50 0.50
741149 Lackawanna, extremely stony	 85 	 Slight		 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments Low strength	 0.50 0.50
741150 Lackawanna, extremely stony	 85 	 	•	 Severe Slope/erodibility 		 - Poorly suited Slope Rock fragments Low strength	 1.00 0.50 0.50
801114 Oquaga	 75 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments	 0.50 0.50
Rock outcrop	 15	 Not rated	 	 Not rated 	 	 Not rated 	
810906 Oquaga	 75 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Slope Rock fragments	 0.50 0.50
Rock outcrop	 15	 Not rated	 	 Not rated 	 	 Not rated 	
1147465 Alden, extremely stony	 90 	 Slight 		 	 	 - Poorly suited Ponding Rock fragments Low strength	 1.00 0.50 0.50
1147467 Arnot, very rocky	 55 	 Slight 		 Moderate Slope/erodibility 		 Poorly suited Rock fragments Slope 	 1.00 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	Pct. of map	l	on	 Hazard of erosion roads and trai		Suitability for roads (natural surface)	
	map unit 			Rating class and limiting features		Rating class and limiting features	
1147467 Lordstown, very rocky	 40 	 	 	 		 Poorly suited Rock fragments Slope	 1.00 0.50
1147468 Arnot	 45 	•	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
Lordstown	 40 	•	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
Rock outcrop	 15	 Not rated 	 	 Not rated 		 Not rated 	
1147469 Arnot	 60 	•	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
Lordstown	 25 	· -		 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 1.00
Rock outcrop	 15	 Not rated 	 	 Not rated]] i	 Not rated 	
1147470 Atherton, very poorly drained	 60 	 	 	 		 - Poorly suited Low strength Ponding	 1.00 1.00
Atherton, poorly drained	 30 	 Slight 	 	 Slight 		 Poorly suited Wetness Low strength	 1.00 0.50
1147471 Catden	 85 	 - Slight - - -	 	 Slight 		 Poorly suited Low strength Ponding Wetness	 1.00 1.00 1.00
1147474 Chippewa, extremely stony		 Slight 	 	 - Slight - -		 Poorly suited Ponding Rock fragments Low strength	 1.00 0.50 0.50
1147475 Colonie	 80 	 Slight 	 	 Slight 	 	 Well suited 	
1147478 Delaware, rarely flooded	 80 	 Slight 	 	 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

	 Pct. of map	l		Hazard of erosion		Suitability for roads (natural surface)		
	map unit 	· — — — — — — — — — — — — — — — — — — —	alue	Rating class and limiting features		 Rating class and limiting features 		
1147482 Fredon, very stony	 50 			Slight	 	 Moderately suited Wetness Low strength	 0.50 0.50	
Halsey, very stony	 40 			Slight	 	 Poorly suited Ponding Low strength	 1.00 0.50	
1147485 Hazen, very stony	 60 			Moderate Slope/erodibility		 Moderately suited Low strength Slope	 0.50 0.50	
Hoosic, very stony	 35 	 Slight 		Slight 	 	 Moderately suited Slope 	 0.50	
1147490 Hoosic, very stony	 60 			Moderate Slope/erodibility		 Moderately suited Slope 	 0.50	
Hazen, very stony	30 	Slight 		Moderate Slope/erodibility		 Moderately suited Slope Low strength	 0.50 0.50	
1147491 Hoosic, very stony	 50 	 		Severe Slope/erodibility		 - Poorly suited Slope	1 1.00	
Otisville, very stony	 40 	 Severe Slope/erodibility 0.		Severe Slope/erodibility		 Poorly suited Slope Sandiness	 1.00 0.50	
1147492 Lackawanna, extremely stony	 85 			Slight	 	 Moderately suited Rock fragments Low strength 	 0.50 0.50	
1147500 Wurtsboro, extremely stony	 90 			Moderate Slope/erodibility		 Moderately suited Rock fragments Wetness	 0.50 0.50	
1147501 Wurtsboro, extremely stony	 60 			Moderate Slope/erodibility		 Moderately suited Rock fragments Wetness	 0.50 0.50	
Swartswood, extremely stony	 40 			Slight	 	 Moderately suited Rock fragments 	 0.50	

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

and soil name	 Pct. of map	İ	on	Hazard of erosion on roads and trails		Suitability for roads (natural surface)		
	map unit 	· 		 Rating class and limiting features 		 Rating class and limiting features 		
1147502 Wurtsboro, extremely stony	 60 	 Slight 		 		Rock fragments	 0.50 0.50	
Swartswood, extremely stony	 40 	 Slight 		 Moderate Slope/erodibility 		•	 0.50 0.50	
1147527 Udorthents	 60 	 Slight 		 Moderate Slope/erodibility		 Moderately suited Low strength	 0.50	
Urban land	40	 Not rated 	 	 Not rated 	! 	 Not rated 		
1147532 Udorthents	 100 	 Slight 		 Moderate Slope/erodibility		 Moderately suited Low strength	1 10.50	
1147533 Wurtsboro, extremely stony	 80 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 - Poorly suited Slope Rock fragments Wetness	 1.00 0.50 0.50	
Swartswood, extremely stony	 20 	 Moderate Slope/erodibility 	•	 Severe Slope/erodibility 		 Poorly suited Slope Rock fragments	 1.00 0.50	
1948749 Arnot	 90 	 Slight 	 	 Moderate Slope/erodibility		 Moderately suited Slope 	 0.50	
1948750 Arnot	 90 	 Slight 		 - Severe Slope/erodibility 		 - Moderately suited Slope 	 0.50	
1948751 Arnot	 90 	 Moderate Slope/erodibility	•	 Severe Slope/erodibility 		 Poorly suited Slope 	 1.00	
1948774 Conotton	 90 	 Slight 		 Moderate Slope/erodibility 		 Moderately suited Slope 	 0.50	
1948775 Conotton	 95 	 Slight 		 Severe Slope/erodibility		 Moderately suited Slope 	 0.50	
1948776 Conotton	 95 	 Moderate Slope/erodibility 	•	 - Severe Slope/erodibility 		 - Poorly suited Slope 	 1.00	
1948777 Conotton	 95 	 Severe Slope/erodibility 	•	 - Severe Slope/erodibility 		 Poorly suited Slope 	 1.00	

Soil Survey of Delaware Water Gap National Recreation Area

Table 6b.--Land Management, Part II (Hazard of Erosion and Suitability for Roads)--Continued

Map unit symbol and soil name	Pct. of	Hazard of erosion		Hazard of erosion roads and trail		Suitability for roads (natural surface)		
I	map	'		I <u></u>		l		
	unit	-		Rating class and		-		
	 	limiting features 	l I	limiting features 	l I	limiting features 	 	
1948797		 	 	 	 	 	1	
Manlius	90	Slight 	 	Moderate Slope/erodibility		Moderately suited Slope	 0.50	
1948802		! 	! 	 	i I	 	i	
Manlius 	90	Slight 	 	Severe Slope/erodibility		Moderately suited Slope	 0.50	
1948818		 	 	 	 	 		
Manlius	90	Moderate Slope/erodibility	•	Severe Slope/erodibility		Poorly suited Slope	11.00	
1948832		I 	! 	! 	! 	I 		
Penargyl	90	Slight -	 	Moderate Slope/erodibility	•	Moderately suited Slope	 0.50	
1948846		 	 	 	 	 	1	
Phelps	90	Slight -	 	Moderate Slope/erodibility		Moderately suited Wetness	 0.50	
1948855		 	 	 	 	 	1	
Udorthents, loamy	95	Slight 	 	Moderate Slope/erodibility 		Moderately suited Low strength Wetness	 0.50 0.50	
1948989		 	 	! 	 	 	1	
Urban land	65	Not rated	ļ	Not rated	ļ	Not rated	!	
 Delaware 	25	 Slight 	 	 Moderate Slope/erodibility	•	 Well suited 	 	

Table 6c.--Land Management, Part III (Site Preparation)

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

and soil name	 Pct. of map unit	mechanical site	е	Suitability fo mechanical sit preparation (surf	е
	unii c 	' 	•	 Rating class and limiting features 	•
290836 Hoosic, very stony	 50 		11.00		 1.00 0.50
Otisville, very stony	 40 		•	 Unsuited Slope	 1.00
296265 Alden	 100	 Well suited	! 	 Well suited	
296269 Fluvents, (alluvial land)		 Well suited	 	 Well suited	
296271 Alvira	 55	 Well suited	! 	 Well suited	
Watson	I 35	 Well suited	 	 Well suited	
296272 Bath	 85 	 Well suited 	 	 Well suited 	
296273 Bath	 85 	 Well suited 	 	' Well suited 	
296274 Bath	 85 	_	 0.50	 Poorly suited Slope	 0.50
296275 Bath	 90 	-		 Poorly suited Rock fragments	 0.50
296276 Bath	 90 	Rock fragments	 0.50 0.50		 0.50 0.50
		 Unsuited Restrictive layer	ĺ	 Poorly suited Rock fragments	 0.50
296278 Benson	 60 	 Unsuited Restrictive layer Slope	11.00	_	 0.50
Rock outcrop		 Not rated 	 	 Not rated 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

Map unit symbol and soil name	 Pct. of map	mechanical site	е	Suitability for mechanical site preparation (surface)		
	unit 	· 		 Rating class and limiting features 		
296279 Benson	 60 	Restrictive layer	•	=	 1.00 0.50	
Rock outcrop	 25 	 Not rated 	! 	 Not rated 	 	
296280 Braceville	 90 	 Well suited 	 	 Well suited 	 	
296281 Braceville	 90	 Well suited 	 	 Well suited 	 	
296283 Buchanan	 90 	 Poorly suited Rock fragments		 Poorly suited Rock fragments	 0.50	
296288 Chippewa	 48 	 Well suited 	 	 Well suited 	 	
Norwich	 48 	 Well suited 	 	 Well suited 	 	
296289 Chippewa		•	 0.50	 Poorly suited Rock fragments	 0.50	
Norwich	 47 	•		 Poorly suited Rock fragments	 0.50	
296295 Udorthents, cut and fill		 Not rated	 	 Not rated	 	
296297 Dekalb	 100 	Restrictive layer Rock fragments		Slope	 0.50 0.50	
296298 Dekalb		· •		Slope Rock fragments	 1.00 0.50	
296303 Hazleton	 100 	Rock fragments	0.50		 0.50 0.50	
296304 Holly	 100	 Well suited 	 	 Well suited 	 	
296311 Lackawanna	 40 	Slope Rock fragments	1.00 0.50	-	 1.00 0.50	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map	mechanical site	е	Suitability fo mechanical sit preparation (surf	е
	unit 	Rating class and		 Rating class and limiting features 	
296311 Bath	 30 	· •	11.00		 1.00 0.50
296312 Lackawanna	 80 	 Well suited 	 	 Well suited 	
296313 Lackawanna	, 80 	' Well suited 	' 	' Well suited 	
296315 Lackawanna	 80 			 Poorly suited Rock fragments 	 0.50
296316 Lackawanna		Rock fragments			 0.50 0.50
296317 Laidig	 100 	•		 - Poorly suited Rock fragments 	 0.50
296326 Lordstown	 85 	 Unsuited Restrictive layer Rock fragments		=	 0.50
296327 Lordstown	 85 			Slope	 0.50 0.50
296328 Lordstown	 40 	· •		Rock fragments	 1.00 0.50
Oquaga		Restrictive layer	11.00	Rock fragments	 1.00 0.50
296329 Mardin	 85 	 Well suited 	 	 Well suited 	
296330 Mardin	 85 	 Well suited 	 	 Well suited 	
296331 Mardin	 85 	 Well suited 	 	 Well suited 	
296332 Mardin		•	10.50	 Poorly suited Slope 	 0.50

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	_	mechanical site	е		е
	unit 	Rating class and		 Rating class and limiting features 	
296335 Meckesville	 100 	 Well suited 	 	 Well suited 	
296337 Meckesville		-		 Poorly suited Slope	 0.50
296338 Morris	 80	 Well suited	 	 Well suited	
296339 Morris	 75 	 - Poorly suited Rock fragments 		 - Poorly suited Rock fragments 	 0.50
296340 Morris	 80 	 - Poorly suited Rock fragments		 - Poorly suited Rock fragments	 0.50
296341 Freetown, mucky peat	 100 			 - Poorly suited Wetness	 0.75
296342 Paupack, mucky peat (shallow)	100	Unsuited		 - Poorly suited Wetness	 0.75
296343 Oquaga		 Unsuited Restrictive layer		' Well suited 	
Lackawanna	 35 	 Well suited 	 	 Well suited 	
296344 Oquaga	, 55 	 Unsuited Restrictive layer		 Well suited 	
Lackawanna	I 30 	 Well suited 	! 	 Well suited 	!
296346 Oquaga	 50 	Restrictive layer		_	 0.50
Lackawanna		=		 Poorly suited Rock fragments	 0.50
296347 Oquaga		=		Slope	 0.50 0.50
Lackawanna	 30 	Rock fragments	0.50		 0.50 0.50
296348 Philo	 85 	 Well suited 	 	 Well suited 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	of map	preparation (deep)		 Suitability for mechanical site preparation (surface) 		
	unit 			 Rating class and limiting features 		
296349 Pope	 90 	 Well suited 	 	 Well suited 	 	
296350 Pope	 90	 Well suited	 	 Well suited		
296351 Rexford, somewhat poorly drained	 40	 Well suited	 	 Well suited	 	
Rexford, poorly drained	 35	 Well suited	! ! !	 Well suited	 	
296355 Sheffield	 100	 Well suited	! ! !	 Well suited 	 	
296363 Dystrochrepts, very stony			 1.00	 Unsuited Slope	 1.00	
296369 Wayland	 100	 Well suited	, 	 Well suited		
296376 Wellsboro	 80	 Well suited	 	 Well suited		
296379 Wellsboro	 85 	Rock fragments	0.50		 0.50 0.50	
296385 Wyoming	, 85 	' Well suited 	 	' Well suited 	 	
296386 Wyoming	 85 	 Well suited 	 	 Well suited 	 	
296387 Wyoming	 85 	' Well suited 	 	' Well suited 	 	
296388 Wyoming	 85 	=		 Poorly suited Slope	 0.50	
296389 Wyoming	 100 		•	 Unsuited Slope	 1.00	
296390 Water	 100	 Not rated	 	 Not rated		
297185 Edgemere	 42 		 1.00	 Unsuited Rock fragments	 1.00	
Shohola	 42 	Rock fragments	11.00	 Unsuited Rock fragments 	 1.00	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	of map	preparation (de	е	Suitability for mechanical site preparation (surface)		
				-		
297186 Edgemere			•	 Unsuited Rock fragments	 1.00	
297188 Manlius	:	Restrictive layer Rock fragments Slope	11.00	Slope	 1.00 0.50	
Arnot	i I	 Unsuited Restrictive layer Rock fragments	 1.00	Slope	 1.00 0.50	
Rock outcrop	1 15	 Not rated	! !	 Not rated 	!	
297189 Manlius	i I	Restrictive layer	1.00 1.00	Rock fragments	 1.00 1.00	
Arnot		Restrictive layer	1.00 1.00	Rock fragments	 1.00 1.00	
Rock outcrop	15	 Not rated	 	 Not rated 		
297190 Braceville	 82 	 Well suited 	 	 Well suited 	 	
297191 Wyalusing	 85	 Well suited	 	 Well suited	 	
297192 Pope	 95 	 Well suited 	 	 Well suited 	 	
297193 Paupack	 90 		 1.00	 Poorly suited Wetness	 0.75	
297196 Freetown	 94 		 1.00	 - Poorly suited Wetness 	 0.75	
297197 Manlius		 Unsuited Restrictive layer		 Poorly suited Rock fragments	 0.50	
297198 Manlius		 Unsuited Restrictive layer		 - Poorly suited Rock fragments	1 1 1 1 1 1 1 1 1 1	
297201 Oquaga		Restrictive layer Slope Rock fragments	1.00 0.50 0.50	Slope	 1.00 0.50 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name		mechanical site		Suitability for mechanical site preparation (surface)	
	unit 	Rating class and		 Rating class and limiting features 	
297203 Delaware	 93 	 Well suited	 	 Well suited 	
297204 Delaware	 82 	 Well suited	 	 Well suited 	
297205 Delaware	 80	 Well suited	 	 Well suited 	
297209 Philo	 85	 Well suited	 	 Well suited	
297210 Barbour	 85	 Well suited	! 	 Well suited	
297216 Wurtsboro		-		 Poorly suited Rock fragments	 0.50
297217 Wurtsboro	 88 	•		 Poorly suited Rock fragments	 0.50
297227 Arnot	 88 	 Unsuited Restrictive layer		 Poorly suited Rock fragments	 0.50
297228 Arnot	 85 	 Unsuited Restrictive layer Slope	11.00	=	 0.50 0.50
297229 Wyoming	I 90 	 Well suited	! 	 Well suited 	
297230 Wyoming	, 90	 Well suited	 	' Well suited 	
297231 Wyoming	' 90 	=		 - Poorly suited Slope 	 0.50
297236 Suncook	 91 	 Well suited	 	 Well suited 	
297237 Mardin	, 85	 Well suited	 	 Well suited	
297238 Mardin	 85	 Well suited	 	 Well suited	
297239 Mardin		_		 Poorly suited Rock fragments	 0.50
297240 Mardin		_		 Poorly suited Rock fragments	 0.50

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	Pct. Of map	•	9	Suitability for mechanical sit	е
	unit 	Rating class and		 Rating class and limiting features 	
297241 Unadilla	 90	 Well suited	 	 Well suited	
297242 Shohola	 62 	•	•	 Unsuited Rock fragments	 1.00
Edgemere		 Poorly suited Rock fragments		 Poorly suited Rock fragments	 0.50
297243 Shohola	•	 Unsuited Rock fragments	•	 Unsuited Rock fragments	 1.00
Edgemere		=		=	 0.50
297244 Lordstown		Restrictive layer		_	 0.50
Swartswood		 Poorly suited Rock fragments		=	 0.50
297247 Chenango	 86	 Well suited	 	 Well suited	
297248 Chenango	 85	 Well suited	 	 Well suited	
297249 Chenango	 90 	· =		 Poorly suited Slope	 0.50
297253 Craigsville		•		 Poorly suited Rock fragments	 0.50
Wyoming	 40 	=		 Poorly suited Rock fragments	 0.50
297254 Pits, shale	 40	 Not rated	 	 Not rated	
Pits, gravel	 40 	 Not rated 	 	 Not rated 	
298049 Wurtsboro, extremely stony	 90 	-	 0.50	 Poorly suited Rock fragments 	 0.50
298050 Wurtsboro, extremely stony	 60 	-			 0.50

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map unit	mechanical site	mechanical site preparation (deep)		r e ace)
	 	Rating class and limiting features	•	Rating class and limiting features	
298050 Swartswood,	 	 	 	 	
extremely stony	40 	=	 0.50	Poorly suited Rock fragments	 0.50
298051 Wurtsboro, extremely stony	 60 	•	 0.50	 - Poorly suited Rock fragments	 0.50
Swartswood, extremely stony	 40 	•	 0.50	 - Poorly suited Rock fragments 	 0.50
298075 Colonie	 80	 Well suited	 	 Well suited	
298188 Lackawanna, extremely stony	 85 	Slope	 0.50	•	 0.50
298189 Lackawanna, extremely stony	 85 	•	 0.50	 - Poorly suited Rock fragments	 0.50
298221 Swartswood, extremely stony	 90 	=	 0.50	 Poorly suited Rock fragments	 0.50
298222 Swartswood, extremely stony	 90 	=	 0.50	 - Poorly suited Rock fragments	 0.50
298223 Swartswood, extremely stony	 85 	Slope	 0.50 0.50	-	 0.50
298255 Delaware, rarely flooded	 80 	 Well suited 	 	 Well suited 	
298256 Delaware, rarely flooded	 80	 Well suited	 	 Well suited	
298257 Wallpack	 85	 Well suited	 	 Well suited	
298258 Wallpack		•	10.50	 Poorly suited Slope 	 0.50

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map unit	mechanical site preparation (deep)		 Suitability fo: mechanical site preparation (surf	е
	 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features 	
298259 Wallpack, extremely stony		•	 0.50	 Poorly suited Rock fragments 	 0.50
298260 Wallpack, extremely stony		•		 - Poorly suited Rock fragments	 0.50
298261 Wallpack	 85 	 Well suited 	 	 Well suited 	
298262 Wallpack, extremely stony	85	Slope	 0.50 0.50	· •	 0.50
298265 Venango, extremely stony	 90 	•	 0.50	 Poorly suited Rock fragments 	 0.50
298266 Venango, extremely stony	 85 	•		 Poorly suited Rock fragments	 0.50
298409 Swartswood, extremely stony	 90 	=		 Poorly suited Rock fragments	 0.50
298411 Swartswood, extremely stony	 90 	•	 0.50	 - Poorly suited Rock fragments	 0.50
298413 Swartswood, extremely stony	 85 	Slope	 0.50 0.50	•	 0.50 0.50
318498 Hazen, very stony		· =	 0.50	 Well suited 	
Hoosic, very stony	 35 	 Well suited 	 	 Poorly suited Rock fragments	 0.50
318533 Hazen, very stony	 50 	=	 0.50	 Well suited 	
Hoosic, very stony	 40 	 Well suited 	 	 Poorly suited Rock fragments 	 0.50

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	Pct. of map	mechanical site preparation (deep)		 Suitability for mechanical site preparation (surface) 	
	i I I	Rating class and limiting features		Rating class and limiting features	
319783 Catden	 85 	 Well suited 	 	 Well suited 	
319784 Fredon, very stony	 50 	 Well suited	 	 Well suited	
Halsey, very stony	40	Well suited		Well suited	
543222 Andover, extremely stony		 Poorly suited Rock fragments		 Poorly suited Rock fragments	 0.50
Buchanan, extremely stony	40	 Poorly suited Rock fragments		 Poorly suited Rock fragments	 0.50
543243 Berks	 65 	Restrictive layer	•	_	 1.00
Weikert	 25 	Restrictive layer	•	_	 1.00
543246 Buchanan	 75	 Well suited	 	 Well suited	
543247 Buchanan, extremely stony				 Poorly suited Rock fragments	 0.50
543257 Chippewa	 90	 Well suited	 	 Well suited	!
543258 Chippewa	' 90 	 Well suited 	' 	 Well suited	'
543259 Chippewa, extremely stony		_	 0.50	 Poorly suited Rock fragments	 0.50
543271 Delaware	 90	 Well suited	 	 Well suited	
543276 Fluvaquents	 85	 Well suited	 	 Well suited	
543292 Hazleton, extremely stony		Rock fragments	 0.50 0.50	•	 0.50 0.50

Table 6c.--Land Management, Part III (Site Preparation)--Continued

	 Pct. of map unit	mechanical site preparation (deep)		•		
	 	Rating class and	•	Rating class and limiting features	•	
543293 Hazleton, extremely stony		Slope	 1.00 0.50	•	 1.00 0.50	
543299 Laidig, extremely stony	 90 			 Poorly suited Rock fragments 	 0.50	
543300 Laidig, extremely stony	 90 	Rock fragments	0.50	•	 0.50	
543304 Laidig	 50 	Slope	11.00	•	 1.00 0.50	
Rubble land	40 	Slope	11.00	•	 1.00 0.50	
543318 Rubble land	 75 	Slope	11.00	 Unsuited Slope Rock fragments	 1.00 0.50	
543327 Swartswood	 90	 Well suited 	 	 Well suited 		
543328 Swartswood	90	 Well suited	, 	 Well suited		
543330 Swartswood, extremely stony	 50		 0.50	 Poorly suited Rock fragments	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Wurtsboro, extremely stony	 30 		 0.50	 Poorly suited Rock fragments 	 0.50	
543331 Swartswood, extremely stony	 50 	Rock fragments	 0.50	•	 0.50	
Wurtsboro, extremely stony	 30 	Rock fragments	 0.50 0.50	•	 0.50	
543359 Volusia	 85 	 Well suited 	 	 Well suited 	 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map unit	mechanical site preparation (deep)		 Suitability for mechanical site preparation (surface) 		
	İ	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		
543360 Volusia, extremely stony	 85 	 Poorly suited Rock fragments 		 Poorly suited Rock fragments 	 0.50	
543374 Wurtsboro	I 90 	 Well suited 	 	 Well suited 	 	
543375 Wurtsboro	 90 	, Well suited 	 	' Well suited 	; ! !	
612280 Scio	 80 	 Well suited 	 	 Well suited 	i 	
612666 Colonie	 80 	 Well suited 	 	 Well suited 	 	
612668 Hoosic, very stony	 60 	 Well suited 	 	 Poorly suited Rock fragments	1 1 1 0.50	
Hazen, very stony	 30 	 Poorly suited Rock fragments		 Well suited 	 	
612724 Lordstown, very rocky		Restrictive layer Slope		Rock fragments	 0.50 0.50	
Wallpack, very rocky	 40 	Slope	0.50	· -	 0.50 0.50	
612732 Atherton, very poorly drained	 60 			 Poorly suited Wetness	 0.75	
Atherton, poorly drained	 30	 Well suited	! 	 Well suited		
612738 Fluvaquents, occasionally flooded	 90	 	 	 	 	
612753 Wallpack, aeolian mantle, very stony-	 85 	 Well suited 	 	 	 	
612756 Wallpack, aeolian mantle, very stony-	 85 	 Well suited 	 	 Well suited 	 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map	mechanical site preparation (deep)		Suitability for mechanical site preparation (surface)		
	unit 	Rating class and		 Rating class and limiting features 		
612757 Wallpack, aeolian mantle, very stony-	 85 	-	 0.50	 Poorly suited Slope 	 0.50	
612767 Wellsboro, extremely stony	 85 	=	 0.50	 Poorly suited Rock fragments	 0.50	
612768 Wellsboro, extremely stony	 85 	•	 0.50	 Poorly suited Rock fragments	 0.50	
613393 Alden, extremely stony	 90 	•	 0.50	 Poorly suited Rock fragments	 0.50	
613447 Unadilla	 85	 Well suited	' 	 Well suited	, 	
613448 Unadilla	 85	 Well suited	 	 Well suited	 	
614075 Wurtsboro, extremely stony		Slope	 0.50	•	 0.50	
Swartswood, extremely stony	 20 	Slope		· •	 0.50 0.50	
620179 Arnot, very rocky	 55 	Restrictive layer	•	_	 1.00 	
Lordstown, very rocky	 40 		11.00		 1.00 	
620180 Arnot		_		Slope	 1.00 0.50	
Lordstown	:	Restrictive layer	11.00	Slope	 1.00 0.50	
Rock outcrop		 Not rated 		 Not rated 	 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

	Pct. Pct. of map unit			 Suitability for mechanical site preparation (surface)		
	l	Rating class and limiting features		=		
620181 Arnot	•	Restrictive layer	1.00 1.00	Rock fragments	 1.00 1.00	
Lordstown	Ī		1.00 1.00	Rock fragments	 1.00 1.00	
Rock outcrop	1 15	 Not rated		 Not rated	į	
623089 Chippewa, extremely stony	80	 Poorly suited Rock fragments		 - Poorly suited Rock fragments	1	
623109 Farmington	İ	 Unsuited Restrictive layer Rock fragments	11.00	_	 1.00	
Rock outcrop	 40	 Not rated	! !	 Not rated	!	
624811 Galway, very rocky	 80 	Slope	1.00 1.00	Rock fragments	 1.00 1.00	
624813 Lackawanna, extremely stony	 85 	 - Poorly suited Rock fragments 		 Poorly suited Rock fragments 	 0.50	
624816 Lordstown, very rocky	İ			Rock fragments	 0.50	
Wallpack, very rocky	 35 	 Poorly suited Rock fragments 		 Poorly suited Rock fragments 	 0.50	
624822 Lordstown	 50 	Restrictive layer		•	 0.50	
Wallpack	1 35 	_	 0.50	 Poorly suited Slope	 0.50	
624823 Lordstown	 50 	 Poorly suited Restrictive layer		 Well suited 	 	
Wallpack	1 35 	 Well suited 	 	 Well suited 	 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map unit	mechanical site preparation (deep)		 Suitability for mechanical site preparation (surface	
	 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features	
624824 Lordstown		 Poorly suited Restrictive layer		 Well suited 	
Wallpack	35	 Well suited	!	 Well suited	
624826 Manlius, very rocky-		Slope Restrictive layer	11.00	Rock fragments	 1.00 0.50
Nassau, very rocky	 25 	Restrictive layer Slope	11.00	Rock fragments	 1.00 0.50
624827 Nassau, very rocky	 55 	Restrictive layer			 0.50
Manlius, very rocky-	 44 	Poorly suited Rock fragments Restrictive layer	0.50		 0.50
624828 Nassau, very rocky		Restrictive layer		=	 0.50
Manlius, very rocky-		=	0.50		 0.50
624829 Nassau, very rocky	 55 	Restrictive layer Slope Rock fragments	1.00 0.50 0.50	Rock fragments	 0.50 0.50
Manlius, very rocky-	 44 	Poorly suited Slope	0.50 0.50	Rock fragments	 0.50 0.50
624832 Nassau	50 	Restrictive layer		Rock fragments	 1.00 0.50
Rock outcrop	 45 	 Not rated 	! 	 Not rated 	!
624841 Oquaga		Slope Restrictive layer	1.00 0.50 0.50	Rock fragments	 1.00 0.50

Table 6c.--Land Management, Part III (Site Preparation)--Continued

		 		<u> </u>		
and soil name	of	mechanical site		Suitability for mechanical site preparation (surface)		
	map unit		ep)	preparation (suri	ace)	
	İ	· 		Rating class and limiting features		
624841	 	 	 	 	I	
Rock outcrop	25 	Not rated 	 	Not rated 	 	
624845 Rock outcrop	 45 	 Not rated 	 	 Not rated 	 	
Farmington		Restrictive layer	1.00 0.50	Rock fragments	 0.50 0.50	
Galway		Restrictive layer Slope	0.50	Rock fragments	 0.50 0.50 	
624846 Rock outcrop	 40	 Not rated	 	 Not rated	 	
Arnot	 30 	Slope	1.00 1.00	Rock fragments	 1.00 1.00	
Rubble land	 20 	Slope	11.00	•	 1.00 1.00	
626816 Udifluvents, occasionally flooded	 90	 Well suited	 	 Well suited	 	
635458 Oquaga, very rocky	 55	=		=	 0.50	
	 	Restrictive layer Rock fragments	10.50	_	0.50 	
Lackawanna, very rocky		 - Poorly suited Rock fragments		 Poorly suited Rock fragments	 0.50	
635459 Oquaga, very rocky	 50 	Restrictive layer Slope		Rock fragments	 0.50 0.50	
Lackawanna, very rocky	 35 	Slope	 0.50 0.50	_	 0.50 0.50	
740953 Delaware, rarely flooded	I 80 	 Well suited 	 	 Well suited 	 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of	mechanical site	е	 Suitability for mechanical site		
	map unit	= =	ep)	preparation (surf	ace)	
		· 		 Rating class and limiting features 		
740968	 	 	 	 	 	
Nassau, very rocky		Restrictive layer		_	 0.50	
Manlius, very rocky-		 Poorly suited Rock fragments Restrictive layer	0.50		 0.50 	
740969 Nassau, very rocky	 55 	Restrictive layer	11.00	_	 0.50	
	 	· •	0.50 0.50		0.50 	
Manlius, very rocky-		=	•	 Poorly suited Slope	 0.50	
	 	Rock fragments Restrictive layer			0.50 	
740971	 	 	 	 	 	
Oquaga, very rocky	55 	Restrictive layer		_	 0.50 	
Lackawanna, very	 	I 	 	I 	 	
rocky	30 	•		Poorly suited Rock fragments	 0.50	
740972	 	 	 	 	 	
Oquaga, very rocky	50 	Restrictive layer Slope		Rock fragments	 0.50 0.50 	
Lackawanna, very		I 	! 	I 	! 	
rocky	35 	•	0.50		 0.50 0.50	
740974	! 	 	! 	I 	! 	
Oquaga		Slope Restrictive layer	11.00	Rock fragments	 1.00 0.50 	
Rock outcrop	l 25	 Not rated	! ! :	 Not rated	! !	
740975	 	 	! ! :	 	 	
Rock outcrop	ĺ	l	ĺ	Not rated 	! !	
Arnot		Slope	1.00 1.00	Rock fragments	 1.00 1.00 	
Rubble land	 20	 Unsuited	 	 Unsuited	 	
	l I	_		•	1.00 1.00	
	i	NOCK ITAGMENTS		ROCK Tragments	I	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map unit	mechanical site preparation (deep)		 Suitability for mechanical site preparation (surface)		
	 	' 		Rating class and limiting features 		
740987 Scio	 80	 Well suited	 	 Well suited 	 	
740988 Udifluvents, occasionally flooded	 90	 - - Well suited	 	 	 	
740991 Unadilla	 85 	' Well suited 	 	' Well suited 	 	
740992 Unadilla	 85 	' Well suited 	 	' Well suited 	 	
740995 Wellsboro, extremely stony	 85 	=		 Poorly suited Rock fragments 	 0.50	
740996 Wellsboro, extremely stony	 85 	=	 0.50	 - Poorly suited Rock fragments	 0.50	
741149 Lackawanna, extremely stony	 85 	=	 0.50	 Poorly suited Rock fragments	 0.50	
741150 Lackawanna, extremely stony	 85 	Slope		•	 0.50	
801114	! 	! 	! 	! 		
Oquaga	75 	Poorly suited Restrictive layer Rock fragments			 0.50 	
Rock outcrop	 15	 Not rated	! !	 Not rated	!	
810906 Oquaga	 75 	Restrictive layer		•	 0.50	
Rock outcrop	 15	 Not rated	 	 Not rated	 	
1147465 Alden, extremely stony	 90 	-		 Poorly suited Rock fragments 	 0.50	
1147467 Arnot, very rocky	 55 	Restrictive layer	•	_	 1.00 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	of	mechanical site	Suitability for mechanical site preparation (deep)		е
		· 		 Rating class and limiting features 	
1147467 Lordstown, very rocky			11.00	 Unsuited Rock fragments 	 1.00
1147468 Arnot	•	Rock fragments	11.00		 1.00 0.50
Lordstown	Ī	Rock fragments Restrictive layer Slope	1.00 0.50 0.50	=	 1.00 0.50
Rock outcrop	 15 		 	 Not rated 	
1147469 Arnot	•	Restrictive layer Slope Rock fragments	1.00 1.00 1.00	Rock fragments	 1.00 1.00
Lordstown	•	Unsuited Slope	1.00 1.00	Rock fragments	 1.00 1.00
Rock outcrop	 15	 Not rated 	 	 Not rated 	
1147470 Atherton, very poorly drained Atherton, poorly	 60 			 - Poorly suited Wetness -	 0.75
drained	•	 Well suited 	! 	 Well suited 	
1147471 Catden	 85 	 Well suited 	 	 Well suited 	i
1147474 Chippewa, extremely stony		. =		 Poorly suited Rock fragments	 0.50
1147475 Colonie	 80	 Well suited	! 	 Well suited	
1147478 Delaware, rarely flooded	 80 	 Well suited 	 	 Well suited 	
1147482 Fredon, very stony	 50	 Well suited	 	 Well suited	
Halsey, very stony	 40 	 Well suited 	 	 Well suited 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	Pct. Pct. of map unit	mechanical site preparation (deep)		 Suitability for mechanical site preparation (surface) 	
	 	Rating class and limiting features		Rating class and limiting features	
1147485 Hazen, very stony	 60 	_	 0.50	 Well suited 	
Hoosic, very stony	, 35 	 Well suited 	 	Poorly suited Rock fragments	 0.50
1147490		 	i	' 	i
Hoosic, very stony	60 	Well suited 	 	Poorly suited Rock fragments	 0.50
Hazen, very stony	30 	-	 0.50	Well suited 	
1147491 Hoosic, very stony	 50 		 1.00	•	 1.00 0.50
Otisville, very stony	 40 		 1.00	 Unsuited Slope 	 1.00
1147492 Lackawanna, extremely stony	 85 	_	 0.50	 Poorly suited Rock fragments	 0.50
1147500 Wurtsboro, extremely stony	 90 	_	 0.50	 Poorly suited Rock fragments	 0.50
1147501	! 	I 	! !	! 	<u> </u>
Wurtsboro, extremely stony	 60 	_	 0.50	 Poorly suited Rock fragments	 0.50
Swartswood, extremely stony	 40 	_	•	 Poorly suited Rock fragments	 0.50
1147502 Wurtsboro, extremely stony	 60 	 Poorly suited Rock fragments		 Poorly suited Rock fragments	 0.50
Swartswood, extremely stony	 40	i I	 	 Poorly suited	 0.50
1147527 Udorthents	 60	 Well suited	 	 Well suited	
Urban land	I 40	 Not rated	 	 Not rated	
1147532 Udorthents	 100 	 Well suited 	 	 Well suited 	

Table 6c.--Land Management, Part III (Site Preparation)--Continued

and soil name	 Pct. of map		е	Suitability for mechanical site preparation (surface)	
	•	· 		 Rating class and limiting features 	
1147533 Wurtsboro, extremely stony	 80 	Slope	0.50	 Poorly suited Slope Rock fragments 	 0.50 0.50
Swartswood, extremely stony		Slope	0.50	•	 0.50 0.50
1948749 Arnot	:	 Unsuited Restrictive layer	•	 Well suited 	
1948750 Arnot		 Unsuited Restrictive layer	•	 Well suited 	
1948751 Arnot	•	Restrictive layer		=	 0.50
1948774 Conotton	 90	 Well suited 	! 	 Well suited 	
1948775 Conotton	' 95 	 Well suited 	' 	 Well suited 	,
1948776 Conotton		•		 Poorly suited Slope 	 0.50
1948777 Conotton	 95 			 Unsuited Slope 	 1.00
1948797 Manlius		 Unsuited Restrictive layer	•	 Well suited 	
1948802 Manlius	•	 Unsuited Restrictive layer	•	 Well suited 	
1948818 Manlius	•	Restrictive layer		•	 0.50
1948832 Penargyl	 90 	 Well suited 	 	 Well suited 	
1948846 Phelps	 90 	 Well suited 	 	 Well suited 	
1948855 Udorthents, loamy	 95 	 Well suited 	 	 Well suited 	

Soil Survey of Delaware Water Gap National Recreation Area

Table 6c.--Land Management, Part III (Site Preparation)--Continued

Map unit symbol and soil name	 Pct. of map unit	mechanical site preparation (deep)		 Suitability for mechanical site preparation (surface) 	
	1	Rating class and	Value	Rating class and	Value
	I	limiting features	1	limiting features	1
	¦	<u> </u>	·¦	<u> </u>	·¦
1948989	I	I	1	I	1
Urban land	65	Not rated	1	Not rated	!
Delaware	 25 	 Well suited 	 	 Well suited 	
	.	1	.	I	.

Table 6d.--Land Management, Part IV (Site Restoration)

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

and soil name	Pct. Potential for dam of soil by fir map		-		
	unit	Rating class and limiting features		-	
290836 Hoosic, very stony			 0.10	 Low 	
Otisville, very stony	 40 	Texture/slope/	 0.50 	 Low I 	
296265 Alden			 0.10 	 High Wetness 	 1.00
296269 Fluvents, (alluvial land)			 0.50 	 Low 	
296271 Alvira	İ	 Moderate Texture/rock fragments	 0.50	 High Wetness 	 1.00
Watson	 35 		 0.10 	 Low 	
296272 Bath	 85 		 0.10 	 Low 	
296273 Bath	İ	Texture/rock	0.10	 Low L	
296274 Bath	 85 	•	 0.10 	 Low L	
296275 Bath	l I	Texture/rock	0.10 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name		Potential for damage to soil by fire		-		
	unit	 Rating class and limiting features 		Rating class and limiting features		
296276 Bath	 90 	•	 0.10	Low	 	
296277 Benson	 55 	•	 0.10	 Low 	 	
296278 Benson	 60 	•	 0.10	 Low 	 	
Rock outcrop	 20 	 Not rated 	 	 Not rated 	 	
296279 Benson	 60	Low	 	Low		
Rock outcrop	l 25 	 Not rated 	 	 Not rated 	 	
296280 Braceville	 90 	 Moderate Texture/surface layer thickness/rock fragments	•	 Low 		
296281 Braceville	 90 	 Moderate Texture/surface layer thickness/rock fragments	•	 Low 	 	
296283 Buchanan	 	 Moderate Texture/surface layer thickness/rock fragments	•	 	 	
296288 Chippewa	 48 			 High Wetness 	 1.00	
Norwich	 48 	•	 0.10 	 High Wetness 	 1.00	
296289 Chippewa	 47 	 Low Texture/rock fragments	 0.10	 High Wetness 	 1.00	
Norwich	 47 	 Low Texture/rock fragments 	 0.10 	 High Wetness 	 1.00 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	Pct. of map	soil by fire	-	Potential for seedling mortality	
	unit			Rating class and limiting features 	
296295 Udorthents, cut and fill		 - - Not rated	 	 - - Not rated	
296297 Dekalb	 100 		 0.50	 Low 	
296298 Dekalb	 100 	 Moderate Texture/slope/ rock fragments	•	 Low 	
296303 Hazleton	 100 	 Moderate Texture/rock fragments	•	 Low 	
296304 Holly				 High Wetness 	 1.00
296311 Lackawanna	 40	 - Low	 	 Low	
Bath	30	Low	<u> </u>	Low	į
296312 Lackawanna	 80 	•	 0.10	 Low 	
296313 Lackawanna	 80 		 0.10	LOW	
296315 Lackawanna	 80 		 0.10	 Low 	
296316 Lackawanna	 80 	 Low Texture/rock fragments	 0.10	 Low 	
296317 Laidig	 100 	 Moderate Texture/rock fragments	 0.50	 Low 	
296326 Lordstown	 85 	 Low Texture/rock fragments 	 0.10 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

 Map unit symbol P and soil name		soil by fire	-	Potential for seedling mortality	
	unit	Rating class and limiting features		-	
296327 Lordstown	 85 	•	 0.10	Low	
296328 Lordstown	 40 	•	 0.50	 Low 	
Oquaga	 35 	 Moderate Texture/slope/ rock fragments	 0.50 	 Low 	
296329 Mardin	 85 	•	 0.10 	 High Wetness	 1.00
296330 Mardin		1	 0.10	 High Wetness	 1.00
296331 Mardin	 85 	•	 0.50	 High Wetness	 1.00
296332 Mardin	 87 	•		 High Wetness	 1.00
296335 Meckesville	 100 	•	 0.10 	Low	
296337 Meckesville	 100 		 0.10 	 Low 	
296338 Morris	 80 		 0.10 	 High Wetness	 1.00
296339 Morris	 75 		 0.50	 High Wetness	 1.00
296340 Morris	 80 		0.50 	 High Wetness 	 1.00

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	of	Potential for dama soil by fire	-	Potential for seedling mortality		
	unit	 Rating class and limiting features 				
296341 Freetown, mucky peat	 100 	Low		•	 1.00 0.50	
296342 Paupack, mucky peat (shallow)		 Low 		 High Wetness Soil reaction	 1.00 0.50	
296343 Oquaga		Texture/rock		 Low	 	
Lackawanna	•	Texture/rock	•	 Low 	 	
296344 Oquaga			 0.50	 Low 	 	
Lackawanna	•	•	 0.10 	 Low 	 	
296346 Oquaga		 Moderate Texture/rock fragments	•	 Low 	 	
Lackawanna	 35 	 Moderate Texture/rock fragments 	•	 Low 	 	
296347 Oquaga	•	 Moderate Texture/rock fragments	•	 Low -	 	
Lackawanna	 30 	•	 0.50 	 Low 	 	
296348 Philo	 85 	Texture/rock	 0.10 	 Low 	 	
296349 Pope			 0.10 	 Low 	 	
296350 Pope	 	fragments	0.10 	 Low -	 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	Pct. of map	soil by fire	-	Potential for seedling mortality	
	unit			Rating class and limiting features 	
296351 Rexford, somewhat poorly drained	 40 	•	 0.10	 - High Wetness	 1.00
Rexford, poorly drained	 35 		 0.10	 High Wetness 	 1.00
296355 Sheffield	 100 	•	 0.10	 High Wetness 	 1.00
296363 Dystrochrepts, very stony			 0.50	 - Low -	
296369 Wayland	 100 		 0.10	 High Wetness 	 1.00
296376 Wellsboro	 80 	 Low Texture/rock fragments	 0.10	 High Wetness 	 1.00
296379 Wellsboro	 85 	•	 0.10	 High Wetness 	1 1 1 1 1 1 1 1 1 1
296385 Wyoming	 85 		 0.10	 Low 	
296386 Wyoming	 85 		 0.10	 Low 	
296387 Wyoming	 85 	 Low Texture/rock fragments	 0.10	 Low 	
296388 Wyoming	 85 		 0.10	 Low 	
296389 Wyoming	 100 		0.50	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	Pct. of map	- · · · · · · · · · · · · · · · · · · ·		Potential for seedling mortality	
	unit	Rating class and limiting features 		Rating class and limiting features	
296390 Water	 100 	 Not rated 	 	 Not rated 	
297185 Edgemere	 42 	 High Texture/surface layer thickness/rock fragments		 High Wetness 	 1.00
Shohola	 42 	 Moderate Texture/surface layer thickness/rock fragments		 High Wetness Soil reaction 	 1.00 0.50
297186 Edgemere	, 75 	 High Texture/surface layer thickness/rock fragments		 High Wetness 	 1.00
297188 Manlius	 40 	 Moderate Texture/rock fragments	 0.50	 Low 	
Arnot	 35 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low 	
Rock outcrop	I 15 	 Not rated 	 	 Not rated 	
297189 Manlius	 40 	 Moderate Texture/slope/ rock fragments	 0.50 	 Low 	
Arnot	 35 	 High Texture/slope/ surface layer thickness/rock fragments	 1.00 	 Low 	
Rock outcrop	 15 	 Not rated 	 	 Not rated 	
297190 Braceville	 82 	•	 0.10 	Low	
297191 Wyalusing	 85 	 Low Texture/rock fragments	 0.10 	 High Wetness	 1.00

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name		soil by fire	-	Potential for seedling mortality	
	unit unit 			Rating class and limiting features	
297192 Pope	 95 		 0.10 	 Low 	
297193 Paupack	 90 	 Low 	 	 High Wetness Soil reaction	 1.00 0.50
297196 Freetown	 94 	 Low 	 	 High Wetness Soil reaction	 1.00 0.50
297197 Manlius	 90 		 0.50 	 Low 	
297198 Manlius	 86 		 0.50 	 Low 	
297201 Oquaga	 75 	Texture/surface layer		 Low 	
297203 Delaware	 93 	•	 0.10 	 Low 	
297204 Delaware	İ	Texture/rock	0.10	 Low 	'
297205 Delaware	 80 	•	 0.10 	 Low 	
297209 Philo	 85 	•	 0.10 	 Low	
297210 Barbour	 85 	•	 0.10 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

Map unit symbol Pct and soil name of ma		-		Potential for seedling mortality 	
	unit	Rating class and		Rating class and limiting features	
297216 Wurtsboro	 92 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low 	
297217 Wurtsboro	 88 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low 	
297227 Arnot	 88 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low 	
297228 Arnot	 85 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low 	
297229 Wyoming	 90 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low 	
297230 Wyoming	 90 91 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low	
297231 Wyoming	 90 		 0.50 	 Low 	
297236 Suncook	 91 	 Moderate Texture/rock fragments	 0.50	 Low	
297237 Mardin	 85 	 Low Texture/rock fragments	0.10 	 High Wetness 	 1.00

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	•	-	Potential for see mortality	dling
	unit	 Rating class and limiting features 		=	
297238 Mardin			 0.10	 High Wetness 	 1.00
297239 Mardin	•	•	 0.10	 High Wetness 	 1.00
297240 Mardin	•	•	 0.10	 High Wetness 	 1.00
297241 Unadilla	•	 Low Texture/rock fragments	 0.10	 Low	
297242 Shohola	 62 	 Moderate Texture/surface layer thickness/rock fragments	10.50	 High Wetness Soil reaction 	 1.00 0.50
Edgemere	 29 	 High Texture/surface layer thickness/rock fragments		 High Wetness 	 1.00
297243 Shohola	 62 	 Moderate Texture/surface layer thickness/rock fragments	0.50 	 High Wetness Soil reaction 	 1.00 0.50
Edgemere	•	 High Texture/surface layer thickness/rock fragments 		 High Wetness 	 1.00
297244 Lordstown	 40 	 Moderate Texture/surface layer thickness/rock fragments	 0.50 	 Low 	
Swartswood	 35 	 Moderate Texture/surface layer thickness/rock fragments 	 0.50 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

Map unit symbol Pc and soil name o		•			
	map unit 			Rating class and limiting features 	
297247 Chenango			 0.10	 Low 	
297248 Chenango	 85 		 0.10	 Low 	
297249 Chenango			 0.10 	 Low 	
297253 Craigsville			 0.50	 Low 	'
Wyoming	•	Texture/surface layer		 - Low	
297254 Pits, shale	 40	 Not rated		 Not rated	
Pits, gravel	 40	 Not rated	 	 Not rated	
298049 Wurtsboro, extremely stony		Texture/surface layer		 High Wetness 	 1.00
298050 Wurtsboro, extremely stony	 60 		 0.10 	 High Wetness 	 1.00
Swartswood, extremely stony	 40 		 0.10 	 Low 	
298051 Wurtsboro, extremely stony	 60 		 0.10 	 High Wetness 	 1.00

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	Pct. of map	- · · · · · · · · · · · · · · · · · · ·		_	
	map unit 			 Rating class and limiting features 	
298051 Swartswood, extremely stony	 40 	 - Low Texture/surface layer thickness/rock fragments	•	 	
298075 Colonie	 80 81 	· -	 1.00 	 Low 	
298188 Lackawanna, extremely stony	 85 	 		 	 0.50
298189 Lackawanna, extremely stony	 85 		 0.10 	 	 0.50
298221 Swartswood, extremely stony	 90 		 0.10 	 	
298222 Swartswood, extremely stony	 90 		 0.10 	 - Low - - -	
298223 Swartswood, extremely stony	 85 		 0.10 	 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	- ·		Potential for seedling mortality	
	unit			Rating class and limiting features 	
298255 Delaware, rarely flooded	 80 	 - Low Texture/surface layer thickness/rock fragments	•	 	
298256 Delaware, rarely flooded	 80 	 - Low Texture/surface layer thickness/rock fragments	 0.10 	 	'
298257 Wallpack	 85 	 Low Texture/surface layer thickness/rock fragments	•	 	
298258 Wallpack	 85 	 Low Texture/surface layer thickness/rock fragments	•	 Low -	
298259 Wallpack, extremely stony			 0.10 	 	
298260 Wallpack, extremely stony		 - Low Texture/surface layer thickness/rock fragments		 	
298261 Wallpack	 85 		 0.10 	 Low -	
298262 Wallpack, extremely stony		 	 0.10 	 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	soil by fire	-	Potential for seedling mortality	
	map unit 			Rating class and limiting features	
298265 Venango, extremely stony	 90 	 Low Texture/rock fragments 	 0.10	 High Wetness 	 1.00
298266 Venango, extremely stony	 85 		 0.10	 High Wetness	 1.00
298409 Swartswood, extremely stony	 90 	_	 0.10 	 Low 	
298411 Swartswood, extremely stony	 90 		 0.10 	 	
298413 Swartswood, extremely stony	 85 	_	 0.10 	 	
318498 Hazen, very stony	 60 	_	 0.10 	 Low 	
Hoosic, very stony	 35 		 0.10 	 Low 	
318533 Hazen, very stony			 0.10	 Low 	
Hoosic, very stony		_	 0.10 	 Low 	
319783 Catden	 85 	 - Low - 	 	 High Wetness 	 1.00

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

Man and the same of	 			 	41:
and soil name	of map	soil by fire	-	Potential for see mortality	aling
	unit	Rating class and		Rating class and limiting features 	
319784	 	I I	 	I I	1
Fredon, very stony	50 		 0.10 	High Wetness 	 1.00
Halsey, very stony	I	 Low Texture/surface layer thickness/rock fragments		 High Wetness 	 1.00
543222	 	! !	 	! !	! !
Andover, extremely stony	 55 		 0.10 	 High Wetness 	 1.00
Buchanan, extremely stony			 0.10	 Low 	
543243 Berks	 65 	•	 0.10 	 Moderate Available water 	 0.50
Weikert	 25 	 Low 	 	 Moderate Available water	 0.50
543246 Buchanan	 75 	•	 0.10	 Low 	
543247 Buchanan, extremely stony		 - Low Texture/surface layer thickness/rock fragments	•	 	
543257 Chippewa	 90 		 0.10 	 High Wetness 	 1.00
543258 Chippewa	 90 		 0.10	 High Wetness 	 1.00
543259 Chippewa, extremely stony		 - Low Texture/rock fragments 	0.10 	 High Wetness 	 1.00

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	soil by fire	-	 Potential for seedling mortality 	
	unit	Rating class and limiting features			
543271 Delaware	 90 	•	 0.10	 - Low -	
543276 Fluvaquents		_		 - High Wetness 	 1.00
543292 Hazleton, extremely stony	90		•	 - Moderate Available water 	 0.50
543293 Hazleton, extremely stony		 - Low -	 	 Moderate Available water 	 0.50
543299 Laidig, extremely stony		 Moderate Texture/surface layer thickness/rock fragments	•	 	
543300 Laidig, extremely stony	 90 		•	 - Moderate Available water 	 0.50
543304 Laidig	 50 51 	Texture/slope/ surface layer	1.00 	 Moderate Available water 	 0.50
Rubble land	 40	 Low	 	 Not rated	
543318 Rubble land	 75 	 - Low -	 	 Moderate Soil reaction	1 1 1 1 1 1 1 1 1 1
543327 Swartswood	 90 	•	 0.10	 Low 	!
543328 Swartswood	•	•	 0.10 	 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name					
	unit			 Rating class and limiting features 	
543330 Swartswood, extremely stony	 50 		 0.10	 - Low - -	
Wurtsboro, extremely stony			 0.10 	 Low 	
543331 Swartswood, extremely stony			•	 - Moderate Available water 	 0.50
Wurtsboro, extremely stony	 30 		•	 Moderate Available water 	 0.50
543359 Volusia	•	•		 - High Wetness 	 1.00
543360 Volusia, extremely stony	•	•	 0.10	 High Wetness 	 1.00
543374 Wurtsboro	 90 	•	 0.10 	 	
543375 Wurtsboro	•	•	 0.10 	 Low Low	
612280 Scio	 80 	•	 0.10 	 Low 	
612666 Colonie	 80 	· -	 1.00 	 Low 	
612668 Hoosic, very stony	 60 	_	 0.10 	 Low Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	·	-	 Potential for see mortality 	dling
	unit 			Rating class and limiting features	
612668 Hazen, very stony	 30 	_	 0.10	 Low 	
612724 Lordstown, very rocky	 50 	•	 0.10 	 	
Wallpack, very rocky	 40 		 0.10 	 Low 	
612732 Atherton, very poorly drained	 60 		 0.10 	 High Wetness 	 1.00
Atherton, poorly drained	 30 	•	 0.10	 High Wetness 	 1.00
612738 Fluvaquents, occasionally flooded	 90 	•	 0.10	 High Wetness 	 1.00
612753 Wallpack, aeolian mantle, very stony-	 85 	_	 0.10 	 - Low - -	
612756 Wallpack, aeolian mantle, very stony-	 85 		 0.10 	 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	soil by fire	-	Potential for seedling mortality	
	unit			 Rating class and limiting features 	
612757 Wallpack, aeolian mantle, very stony-	 85 	 - Low Texture/surface layer thickness/rock fragments		 Low 	
612767 Wellsboro, extremely stony	 85 		 0.10 	 - Low -	
612768 Wellsboro, extremely stony	 85 		 0.10 	 - Low - 	
613393 Alden, extremely stony	 90 		 0.10	 	 1.00
613447 Unadilla	 85 		 0.10	 Low 	
613448 Unadilla	 85 	•	 0.10 	 Low 	
614075 Wurtsboro, extremely stony	 80 	 - Low Texture/surface layer thickness/rock fragments		 High Wetness 	 1.00
Swartswood, extremely stony	 20 	_	 0.10 	 Low 	
620179 Arnot, very rocky	 55 		 0.10 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name					
	unit	· 		Rating class and limiting features 	
620179 Lordstown, very rocky	 40 	 - Low Texture/surface layer thickness/rock fragments	 0.10 	 	
620180 Arnot	 45 	 Low Texture/surface layer thickness/rock fragments	 0.10 	 Low Low 	
Lordstown	 40 	 Low Texture/surface layer thickness/rock fragments	 0.10 	 Low 	
Rock outcrop	1 15	 Not rated 		 Not rated 	
620181 Arnot			 0.50 	 Low 	
Lordstown	 25 		 0.50 	 Low 	
Rock outcrop	1 15	 Not rated 	į	 Not rated 	į
623089 Chippewa, extremely stony		 - Low Texture/surface layer thickness/rock fragments		 - High Wetness - -	 1.00
623109 Farmington	 50 51 		 0.10 	 Low 	
Rock outcrop	 40 	 Not rated 	 	 Not rated 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	of	·	-	-	
	map unit 	· — — — — — — — — — — — — — — — — — — —		 Rating class and limiting features 	
624811 Galway, very rocky			 0.50 	 - Low	
624813 Lackawanna, extremely stony	 85 	 Low Texture/surface layer thickness/rock fragments	•	 Moderate Soil reaction 	 0.50
624816 Lordstown, very rocky	 50 	 Low Texture/surface layer thickness/rock fragments	 0.10 	 Low 	
Wallpack, very rocky	 35 		 0.10 	 Low 	
624822 Lordstown	 50 51 1	 Low Texture/surface layer thickness/rock fragments	•	 Low 	
Wallpack	 35 	•	 0.10 	 Low 	
624823 Lordstown	 50 	 Low Texture/surface layer thickness/rock fragments	 0.10 	 Low 	
Wallpack	 35 		 0.10 	 Low 	
624824 Lordstown	 50 	 Low Texture/surface layer thickness/rock fragments	 0.10 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	- ·			
	unit 			Rating class and limiting features	
624824 Wallpack	 35 1 		 0.10 	 Low 	
624826 Manlius, very rocky-	 60 		 0.50 	 Low 	
Nassau, very rocky	 25 		 0.50 	 Low 	
624827 Nassau, very rocky	 55 	_	 0.10	 Low 	
Manlius, very rocky-	 44 	_	 0.10 	 Low 	
624828 Nassau, very rocky	 55 	_	 0.10	 Low 	
Manlius, very rocky-	 44 		 0.10 	 Low 	
624829 Nassau, very rocky	 55 	_	 0.10	 Low 	
Manlius, very rocky-	 44 		 0.10 	 Low 	
624832 Nassau	 50 50 		 0.50 	 Low 	
Rock outcrop	 45 	 Not rated 	 	 Not rated 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	Pct. of map	· -	_		dling
	unit			Rating class and limiting features	
624841 Oquaga		Texture/slope/	•	 Low 	
Rock outcrop	25	 Not rated 	! 	 Not rated 	! !
624845 Rock outcrop	 45	 Not rated	 	 Not rated	!
Farmington		 Low Texture/surface layer thickness/rock fragments	•	 Low 	
Galway	 20 	 Low Texture/surface layer thickness/rock fragments	•	 Low 	
624846 Rock outcrop	 40	 Not rated	 	 Not rated	
Arnot		Texture/slope/	•	 Low 	
Rubble land	I 20 	 Not rated 	 	 Not rated 	
626816 Udifluvents, occasionally flooded	į	 Moderate Texture/surface layer thickness/rock fragments	0.50 	 - Low - -	:
635458 Oquaga, very rocky	 55 	_	 0.10 	 Low 	
Lackawanna, very rocky	 30 	 Low Texture/surface layer thickness/rock fragments		 Moderate Soil reaction 	 0.50

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	-		Potential for seedling mortality	
	unit			Rating class and limiting features 	
635459 Oquaga, very rocky	 50 	 Low Texture/surface layer thickness/rock fragments	•	 Low 	
Lackawanna, very rocky	 35 	 Low Texture/surface layer thickness/rock fragments	 0.10 	 Moderate Soil reaction 	 0.50
740953 Delaware, rarely flooded	 80 	 - Low Texture/surface layer thickness/rock fragments	 0.10 	 	'
740968 Nassau, very rocky	 55 	 Low Texture/rock fragments	 0.10	 Low 	
Manlius, very rocky-	 44 	 Low Texture/rock fragments	 0.10 	 Low	
740969 Nassau, very rocky	 55 	 Low Texture/rock fragments	 0.10	 Low 	!
Manlius, very rocky-	 44 	 Low Texture/rock fragments	 0.10	Low 	
740971 Oquaga, very rocky	 55 		 0.10 	 Low 	
Lackawanna, very rocky	 30 	 Low Texture/surface layer thickness/rock fragments	 0.10 	 Moderate Soil reaction 	 0.50
740972 Oquaga, very rocky	50 		 0.10 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

= = = = = = = = = = = = = = = = = = = =		soil by fire	-	Potential for seedling mortality	
	unit			Rating class and limiting features 	
740972 Lackawanna, very rocky	 35 		•	 Moderate Soil reaction 	 0.50
740974 Oquaga			 0.50 	 Low 	
Rock outcrop	 25	 Not rated	! 	 Not rated	-
740975 Rock outcrop	 40 	 Not rated 	 	 Not rated 	
Arnot		Texture/slope/ surface layer	 0.50 	Low 	
Rubble land	 20	 Not rated	 	 Not rated	!
740987 Scio	•	•	 0.10 	 Low 	
740988 Udifluvents, occasionally flooded	 	Texture/surface layer thickness/rock	•	 - Low - -	
740991 Unadilla	 85 	•	 0.10	 Low 	
740992 Unadilla	 85 	•	 0.10 	 Low 	
740995 Wellsboro, extremely stony	 	Texture/rock	 0.10 	 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	•			
	unit	· ————————————————————————————————————		 Rating class and limiting features 	
740996 Wellsboro, extremely stony	 85 	_	 0.10	 Low 	
741149 Lackawanna, extremely stony	 85 	 - Low Texture/surface layer thickness/rock fragments	•	 Moderate Soil reaction 	 0.50
741150 Lackawanna, extremely stony	 85 	 - Low Texture/surface layer thickness/rock fragments	•	 Moderate Soil reaction 	 0.50
801114 Oquaga	 75 	 Low Texture/surface layer thickness/rock fragments	•	 Low 	
Rock outcrop	 15	 Not rated 	 	 Not rated	!
810906 Oquaga	 75 	 Low Texture/surface layer thickness/rock fragments	•	 Low -	
Rock outcrop	 15	 Not rated	 	 Not rated	!
1147465 Alden, extremely stony	 90 		 0.10	 High Wetness 	 1.00
1147467 Arnot, very rocky	 55 		 0.10 	 Low - - -	
Lordstown, very rocky	 40 		 0.10 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name	 Pct. of map	·		Potential for seedling mortality	
	unit			=	
1147468 Arnot	İ	 Low Texture/surface layer thickness/rock fragments	•	 Low 	
Lordstown	İ	İ	•	 Low 	
Rock outcrop	 15 	 Not rated 	 	 Not rated 	
1147469 Arnot		 Moderate	•	 Low	
	 	Texture/slope/ surface layer thickness/rock fragments	0.50 	 	
Lordstown			 0.50 	 - Low	
Rock outcrop	 15	 Not rated	 	 Not rated	
1147470 Atherton, very poorly drained		 - Low Texture/surface layer thickness/rock fragments		 High Wetness 	 1.00
Atherton, poorly drained	ĺ	Texture/rock	0.10	 High Wetness 	 1.00
1147471 Catden	 85 	 Low 	 	 High Wetness	 1.00
1147474 Chippewa, extremely stony			 0.10 	 High Wetness 	 1.00
1147475 Colonie	 80 		 1 1.00 	 Low 	

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

Map unit symbol Pct and soil name of ma		· -			
	unit 			Rating class and limiting features	
1147478 Delaware, rarely flooded	 80 	•	 0.10 	 	
1147482 Fredon, very stony	 50 	 Low Texture/rock fragments	 0.10	 High Wetness	 1.00
Halsey, very stony	 40 		 0.10 	 High Wetness 	 1.00
1147485 Hazen, very stony	 60 	 Low Texture/rock fragments	 0.10 	 Low 	
Hoosic, very stony	 35 	 Low Texture/rock fragments	 0.10 	 Low 	
1147490 Hoosic, very stony	 60 	 Low Texture/rock fragments	 0.10	 Low 	
Hazen, very stony	 30 	 Low Texture/rock fragments	 0.10 	 Low 	
1147491 Hoosic, very stony	1		 0.10 	 Low 	
Otisville, very stony	40 	 Moderate Texture/slope/ surface layer thickness/rock fragments	 0.50 	 Low 	
1147492 Lackawanna, extremely stony	 85 	 - Low Texture/surface layer thickness/rock fragments	 0.10 	 Moderate Soil reaction 	 0.50

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

and soil name		Potential for dama soil by fire	-		
	map unit 			 Rating class and limiting features 	
1147500 Wurtsboro, extremely stony	 90 		 0.10 	 High Wetness 	 1.00
1147501 Wurtsboro, extremely stony	 60 		 0.10 	 High Wetness 	 1.00
Swartswood, extremely stony	40 		 0.10 	 Low 	
1147502 Wurtsboro, extremely stony	 60 		 0.10 	 High Wetness 	 1.00
Swartswood, extremely stony	 40 	_	 0.10 	 Low 	
1147527 Udorthents	 60 	 Low Texture/rock fragments	 0.10	 Low 	
Urban land	 40	 Not rated		 Not rated	1
1147532 Udorthents	 100 	 Low Texture/rock fragments	 0.10	 Low 	
1147533 Wurtsboro, extremely stony	I		 0.10 	 High Wetness 	 1.00

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

= =		soil by fire	-	Potential for seedling mortality	
	unit				
1147533 Swartswood, extremely stony	 20 	Low Texture/surface layer thickness/rock fragments		 	
1948749	i	i İ	i	i İ	i
Arnot	•	•	 0.10 	Low 	
1948750 Arnot	 90 	•	 0.10	 Low 	
1948751 Arnot	 90 	•		 Moderate Available water 	 0.50
1948774 Conotton	 90 	•	 0.50	 Low 	
1948775 Conotton	•	•	 0.50	 Fom 	
1948776 Conotton	 95 		•	 Moderate Available water 	 0.50
1948777 Conotton		 Moderate Texture/rock fragments	•	 Moderate Available water 	 0.50
1948797 Manlius	İ	•	 0.10	 Low 	!
1948802 Manlius	 90 	•	 0.10 	 Low -	
1948818 Manlius	 90 	Texture/rock fragments	0.10 	 Moderate Available water 	 0.50

Soil Survey of Delaware Water Gap National Recreation Area

Table 6d.--Land Management, Part IV (Site Restoration)--Continued

map	
limiting features limiting features limiting features	
Penargyl	;
Penargyl	
Texture/rock 0.10	i
Phelps 90 Low	i I
Texture/rock 0.10	
fragments 1948855 Udorthents, loamy 95 Moderate Low Texture/rock 0.50 fragments	İ
Udorthents, loamy 95 Moderate Low Texture/rock 0.50 fragments	
fragments	I
	<u> </u>
1948989	
Urban land 65 Not rated Not rated	İ
Texture/rock 0.10 fragments	!

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

	 Pct. of	•		Picnic areas	
	map	Rating class and limiting features		Rating class and limiting features	
	<u> </u>	l	·		-
290836 Hoosic, very stony		 Very limited Slope Large stones 	 1.00 0.19 	· •	 1.00 0.61 0.19
Otisville, very stony	 40 	Slope	 1.00 0.19 	·	 1.00 0.84 0.19
296265 Alden	 100 	 Very limited Depth to saturated zone Ponding Slow water movement Dusty	1.00 1.00	Depth to Saturated zone Slow water movement	 1.00 1.00 10.51 0.03
296269 Fluvents, (alluvial land)	70	 Very limited Flooding Depth to saturated zone	•	 Somewhat limited Depth to saturated zone Flooding	 0.75 0.40
296271 Alvira	I	 Very limited Depth to saturated zone Large stones Dusty	11.00	-	 1.00 0.53 0.01
Watson		 Somewhat limited Depth to saturated zone Slow water movement Large stones Dusty	0.98 	Depth to saturated zone Large stones	 0.96 0.75 0.53 0.01
296272 Bath	 85 	 Somewhat limited Depth to saturated zone Gravel Dusty 		saturated zone	 0.24 0.14 0.03

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	_	Rating class and limiting features 		=	
296273 Bath	 85 85 	Depth to saturated zone Gravel	0.63 0.28 0.24	Gravel Depth to saturated zone	 0.63 0.24 0.14
296274 Bath	 85 	Depth to saturated zone Gravel	1.00 0.28 0.24	Gravel Depth to saturated zone	 1.00 0.24 0.14
296275 Bath	 90 	Depth to saturated zone Gravel	1.00 0.28	Depth to saturated zone Gravel	 1.00 0.14 0.11 0.03
296276 Bath	 90 	Slope Depth to saturated zone Gravel	1.00 1.00 0.28	Slope Depth to saturated zone Gravel	 1.00 1.00 0.14 0.11 0.03
296277 Benson	 55 	=		 Very limited Depth to bedrock Dusty	 1.00 0.05
296278 Benson	 	Slope Depth to bedrock	1.00 1.00	Depth to bedrock	 1.00 1.00 0.05
Rock outcrop	 20 	 Not rated 	į	 Not rated 	į
296279 Benson	 60 	 Very limited Slope Depth to bedrock Dusty	11.00	Depth to bedrock	 1.00 1.00 0.05
Rock outcrop	25 	Not rated 	l I	Not rated 	I I
296280 Braceville	90 91 	 Somewhat limited Depth to saturated zone Gravel Dusty	0.07	Depth to saturated zone	 0.04 0.03 0.01

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

and soil name	of			l	
		Rating class and limiting features			
296281 Braceville	 	Depth to saturated zone Gravel	0.07 0.04	Depth to saturated zone	
296283	 	Dusty 	0.01 	Dusty 	0.01
Buchanan		Depth to saturated zone	0.07 	Depth to saturated zone	 1.00 0.03 0.03
296288 Chippewa	 40	 Town limited		 Tom: limited	
Cnippewa	l I	Depth to saturated zone	1.00 	Depth to saturated zone	
	İ	Ī	Ì	i -	0.03
Norwich	į	saturated zone	İ	Very limited Depth to saturated zone Dusty	 1.00 0.02
296289	' 	<u> </u>	 		
Chippewa	 	 Very limited Depth to saturated zone Large stones	 1.00 1.00	Depth to saturated zone	 1.00 1.00 0.03
	 	Gravel 	0.01 	Gravel 	0.01
Norwich	l I	Depth to saturated zone Large stones	1.00 1.00	·	1.00
296295 Udorthents, cut and		 	 	 	
fill	90 	Not rated 	 	Not rated 	
296297 Dekalb	 100 	Slope	 1.00 1.00 0.01	Slope	 1.00 1.00 0.01
296298 Dekalb	 100 	•	 1.00 1.00 0.01	Slope	 1.00 1.00 0.01
296303 Hazleton	 	 Very limited Large stones Slope 	1.00 1.00		 1.00 1.00

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	·		 	
	map	Rating class and limiting features	•	•	•
296304	 	 	 	 	
Holly		Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	0.40
	 	Dusty 	0.04 	Dusty 	0.04
296311 Lackawanna		Slope Large stones Depth to saturated zone	1.00 1.00 0.24	Slope	 1.00 1.00 0.12 0.01
Bath	 30 	Slope Large stones Depth to saturated zone Dusty	1.00 1.00 0.28 0.03	 Very limited Large stones Slope Depth to saturated zone Dusty Gravel	 1.00 1.00 0.14 0.03 0.01
296312 Lackawanna	İ	saturated zone Large stones	0.24 0.14	 Somewhat limited Large stones Depth to saturated zone Dusty	 0.14 0.12 0.01
296313	 	 	 	 	
Lackawanna		Slope Depth to saturated zone Large stones	0.63 0.24 0.14	Somewhat limited Slope Large stones Depth to saturated zone Dusty	 0.63 0.14 0.12 0.01
296315		! 		! 	
Lackawanna		• •	1.00 0.24	Depth to saturated zone	 1.00 0.12 0.01
296316		, 	į	, 	į
Lackawanna	80 	•	1.00 1.00 0.24	Slope Depth to saturated zone	 1.00 1.00 0.12 0.01
296317 Laidig	 	 Very limited Large stones Dusty 	1.00 0.06		 1.00 0.06

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	 Camp areas 		Picnic areas	
		Rating class and limiting features			
296326		 	1		
Lordstown		Large stones	11.00	Very limited Large stones Dusty	 1.00 0.02
296327 Lordstown	 85	 Vory limited		 Very limited	
20143 30 11	ĺ	Large stones Slope	11.00	Large stones Slope	1.00 1.00 0.02
296328	 	 	 	 	
Lordstown		_		Very limited Large stones	 1.00
	i	· •		•	11.00
	ļ .	Dusty	0.01	Dusty	0.01
Oquaga	I 35	 Very limited		 Very limited	
	I	Slope	1.00	Large stones	11.00
	!			•	1.00
	 				0.08 0.02
	i	Dusty 	0.02 	Dusty	10.02
296329			!		1
Mardin	85 	Very limited Depth to	I I1 00	Somewhat limited Depth to	 0.94
	i	saturated zone		saturated zone	•
	i				0.24
		Dusty	10.03	Dusty	10.03
296330	 	 		! 	
Mardin	85	·		Somewhat limited	1
	!	· -		Depth to saturated zone	0.94
	1				10.63
	i	•		•	0.24
	İ	Dusty	10.03	Dusty	10.03
296331	 	 		! 	
Mardin			•	Somewhat limited	1
	•	· •		Depth to	0.94
	1	saturated zone Large stones	 0.53	saturated zone Large stones	 0.53
	i	Dusty	10.03	_	10.03
	İ	Gravel	0.01	=	0.01
296332	l I	 	1	 	1
Mardin	87	Very limited	i	Very limited	i
	l	· •	11.00	•	1.00
	 	saturated zone Slope		Depth to saturated zone	0.94
	•	•		Large stones	10.53
	Ì	Dusty	•	Dusty	10.03
	 	Gravel	0.01	Gravel	0.01
296335		! 		! 	
Meckesville	•	Somewhat limited		Somewhat limited	1
	!	Slope	10.63	•	10.63
	l I	Gravel Dusty	0.16 0.03		0.16 0.03
	:	l Dusty		Dusty 	10.03

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

and soil name	 Pct. of	- I		 	
	map	Rating class and limiting features			
296337 Meckesville		Slope Large stones	1.00 0.53	•	 1.00 0.53 0.03
296338 Morris	 80 	Depth to Saturated zone Slow water movement Gravel	1.00 0.99 0.29	Slow water movement Gravel	 1.00 1.09 1.09 1.29 1.02
	:	Depth to saturated zone Large stones	1.00 1.00	 Very limited Large stones Depth to saturated zone Dusty	 1.00 1.00 0.02
296340 Morris	 80 	Depth to Saturated zone Large stones Slope	1.00 1.00 0.16	 Very limited Large stones Depth to saturated zone Slope Dusty	 1.00 1.00 0.16 0.02
296341 Freetown, mucky peat 296342	 100 	 Not rated 	 	 Not rated 	
Paupack, mucky peat (shallow)		 Not rated 	 	 Not rated 	
296343 Oquaga	 50 	Gravel	0.62	 Somewhat limited Gravel Dusty	 0.62 0.02
Lackawanna		Gravel Depth to saturated zone	0.62 0.24 	 Somewhat limited Gravel Depth to saturated zone Dusty	 0.62 0.12 0.01
296344 Oquaga	 55 	Slope Gravel	 0.63 0.62 0.02	Gravel	 10.63 0.62 0.02
Lackawanna	ĺ	Slope Gravel	0.63 0.62 0.24 	Gravel Depth to saturated zone	 0.63 0.62 0.12 0.01

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	·		 	
	-	Rating class and limiting features		-	
296346	 	 	 	 	
Oquaga		Very limited		Very limited	
	! !	Large stones Gravel	1.00 0.08		1.00 0.08
	! 	Dusty	10.00	•	10.02
Lackawanna	 35	 Verv limited	1	 Very limited	1
	•	Large stones	•		11.00
	İ	Depth to		Depth to	0.12
	I	saturated zone	1	saturated zone	1
		Dusty	0.01	Dusty	0.01
296347	! 	l 		l 	
Oquaga	60	Very limited		Very limited	1
	!		1.00		1.00
	!	Slope	11.00	•	1.00
	!	Gravel Dusty		Gravel	0.08 0.02
	! !	l Dusty	10.02	Dusty 	10.02
Lackawanna	I 30	' Very limited	i	Very limited	i
	i	Large stones	•	Large stones	11.00
	İ	Slope		Slope	11.00
	I	Depth to	0.24	Depth to	0.12
	I	saturated zone	1	saturated zone	1
	 	Dusty	0.01	Dusty	0.01
296348	İ		i		i
Philo	85	Very limited	•	Somewhat limited	1
	!	Flooding		Flooding	10.40
	!	Depth to		Depth to	10.03
	 	saturated zone Dusty	 0.02	saturated zone Dusty	 0.02
296349] 	1	 	1
	, I 90	 Very limited	i	 Somewhat limited	i
-	İ	Flooding	11.00		0.01
	l	Dusty	[0.01		!
296350	! 	I 		I 	
Pope	90	Very limited	1	Somewhat limited	1
	l	Flooding	11.00	· •	0.01
	 	Dusty 	0.01 	 	
296351	į	İ	į	İ	į
Rexford, somewhat	1 40		1		!
poorly drained	40		11.00	Very limited Depth to	11 00
	! !	Depth to saturated zone		Depth to saturated zone	1.00
	! !	Sacurated Zone	10.96	•	10.96
	i	movement	1	movement	1
	į	Dusty	0.01		0.01
Rexford, poorly	I I	 	 	 	1
drained	35	Very limited	İ	Very limited	İ
	I	Depth to	11.00	·	11.00
	l	saturated zone	I	saturated zone	İ
	l	Slow water	10.96	•	10.96
	l	movement	1	movement	1
		Dusty	0.01	Dusty	10.01

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	 Rating class and limiting features 		 Rating class and limiting features 	
296355			 	1	
Sheffield		Very limited Depth to saturated zone	11.00	Very limited Ponding Depth to	 1.00 1.00
	 	Ponding Slow water	1.00 0.21	saturated zone	0.21
	 	movement Dusty 	 0.04 	movement Dusty 	 0.04
296363 Dystrochrepts, very	 	' 	 	 	i i
stony	85	Very limited	I	Very limited	1
	ļ	Slope	1.00	•	11.00
	!	Large stones	10.53		10.53
	!	Gravel	10.07		10.07
	 	Dusty -	0.02 	Dusty 	0.02
296369 Wayland	 100	 Very limited	•	 Very limited	
	I	Depth to	1.00		11.00
	!	saturated zone	•	Depth to	11.00
	!	Flooding	1.00	•	1
	!	Ponding Slow water	1.00 0.96	•	10.96
	! !	Slow water movement	10.96	Flooding	10.40
		Dusty	0.06	•	10.06
296376	 00	 	<u> </u>	 	
Wellsboro	80 	Very limited Depth to	1	· •	 0.94
	!	saturated zone		saturated zone	
	 	Large stones Dusty	0.14 0.01		0.14 0.01
296379	 	 	 	 	
Wellsboro	85	Very limited	1	Very limited	1
	I	Depth to	1.00		11.00
	!	saturated zone	•	Slope	11.00
	!	Large stones	1.00	· •	0.94
	! !	Slope Dusty	1.00 0.01	•	 0.01
	İ	Dascy	1	Duscy	1
296385	1	I	I	I	I
Wyoming	85 	Somewhat limited Gravel	l 10.76	Somewhat limited Gravel	l 10.76
	į	İ	į	İ	İ
296386	l . 05		!		!
Wyoming	85 	Somewhat limited Gravel	I 0.76	Somewhat limited Gravel	 0.76
296387	 	 	 	 	1
	85	 Somewhat limited	i	 Somewhat limited	i
	İ	Gravel	0.76	•	0.76
	l I	Slope	0.63	Slope 	0.63
296388			į		
Wyoming	85	Very limited		Very limited	1
2 . 3					
1. 5	ļ	Slope Gravel	1.00 0.76	•	1.00 0.76

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

Map unit symbol	 Pct.	 Camp areas		 Picnic areas	
and soil name	of	I		i	
		Rating class and limiting features 			
296389	 	 	 	 	
Wyoming		Very limited Slope	 1.00	Very limited Slope	 1.00
	! !	Slope Gravel	10.76	•	10.76
296390	 	 	 	 	
Water	100 	Not rated 	 	Not rated 	
297185 Edgemere		 	İ	 	İ
Edgemere	4 2	NOC Tated		Very limited Large stones	11.00
	i	i I	•	Ponding	11.00
	i	İ		Depth to	11.00
	I	I	1	saturated zone	
	 	 	1	Dusty 	0.01
Shohola	42	 Very limited	i	Very limited	i
	Ì	Depth to	11.00	Large stones	11.00
	I	saturated zone	1	Depth to	1.00
	1	Large stones		saturated zone	
	!	Slope		Slope	10.04
	 	Dusty 	U.UI	Dusty 	0.01
297186 Edgemere	 75	 Not_rated		 Very limited	
Edgemere	/3 	NOC Tated	•		11.00
	i	i		Ponding	11.00
	į .	İ		•	11.00
	I	I	1	saturated zone	1
	 	 	 	Dusty 	0.01
297188	i 		į		į
Manlius		Very limited Slope		Very limited Large stones	 1.00
	<u> </u>	•			11.00
	i	•		•	0.90
	1	Dusty	0.02	Dusty	0.02
Arnot	 35	 Very limited	i	 Very limited	
	!	•			1.00
	 	•	1.00 1.00	Slope Depth to bedrock	1.00 1.00
Rock outcrop	l I 15	 Not rated	 	 Not rated	1
•	-0	!	į	!	į
297189 Manlius	I I 40	 Von: limited	1	 Vom: limited	1
Maniius		Slope		Very limited Large stones	11.00
	i	Large stones		Slope	11.00
	İ	Gravel		•	0.90
	1	Dusty		Dusty	0.02
Arnot	 35	 Very limited	•	 Very limited	
	l	Slope	1.00	Large stones	1.00
	l	-		Slope	1.00
	 	Depth to bedrock	1.00 	Depth to bedrock	1.00
Rock outcrop				Not rated	į
	ı	I	1	l	1

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	· •		 	
	-	Rating class and limiting features		-	
297190 Braceville		Depth to	0.81	 Somewhat limited Depth to saturated zone	 0.48
297191 Wyalusing	•	Depth to saturated zone	1.00 	 Very limited Depth to saturated zone Flooding	1.00
297192 Pope		· •	•	 Somewhat limited Flooding 	 0.40
297193 Paupack	, 90	 Not rated 	 	 Not rated 	<u>i</u>
297196 Freetown	 94 	 Not rated 	 	' Not rated 	
297197 Manlius	 90 	Gravel	0.53 0.19		 0.53 0.19 0.02
297198 Manlius	•	Slope Large stones Gravel	0.63 0.53 0.19		 0.63 0.53 0.19 0.02
297201 Oquaga	 75 	Slope Large stones Gravel	1.00 1.00 0.45	Slope	 1.00 1.00 0.45 0.02
297203 Delaware		· •	 1.00	 Not limited 	
297204 Delaware		· -	 1.00	 Not limited 	
297205 Delaware		Flooding	1.00 0.96	•	 0.96
297209 Philo	Ī	Flooding Depth to saturated zone	 1.00 0.07	 Somewhat limited Flooding	 0.40 0.03 0.01

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
İ	map	Rating class and limiting features		Rating class and limiting features	
297210 Barbour	 85 	 Very limited Flooding Too sandy	 1.00 0.01		 0.01
297216 Wurtsboro	 92 	 Very limited Large stones Depth to saturated zone	1.00	 Very limited Large stones Depth to saturated zone	 1.00 0.68
297217 Wurtsboro		 Very limited Large stones Depth to saturated zone Slope	1.00 0.95	Depth to saturated zone	 1.00 0.68 0.63
297227	 	I 		 	
Arnot	88 	Very limited Gravel Depth to bedrock Slope Dusty	11.00	•	 1.00 1.00 0.04 0.01
297228 Arnot		 Very limited Slope Gravel Depth to bedrock Dusty	1.00 1.00	Gravel Depth to bedrock	 1.00 1.00 1.00 0.01
297229 Wyoming	 90 	 Somewhat limited Large stones Gravel	 0.08 0.06		 0.08 0.06
297230 Wyoming	I I	 Somewhat limited Slope Large stones Gravel	0.63 0.08	· •	 0.63 0.08 0.06
297231 Wyoming		 Very limited Slope Large stones Gravel	1.00 0.08	 Very limited Slope Large stones Gravel	 1.00 0.08 0.06
297236 Suncook	 91 	 Very limited Flooding Too sandy	 1.00 0.59	· •	 0.59
297237 Mardin	 85 	 Very limited Depth to saturated zone Gravel Dusty	1.00 0.09 0.03	 Somewhat limited Depth to saturated zone Gravel Dusty	 0.94 0.09 0.03

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	 Camp areas 		 	
	map	Rating class and limiting features			
297238 Mardin		saturated zone Slope Gravel	1.00 0.63 0.09	Gravel	 0.94 0.63 0.09 0.03
297239 Mardin		Dusty	1.00 1.00 0.02	•	 1.00 0.94 0.02 0.01
297240 Mardin		saturated zone Large stones Slope Dusty	1.00 1.00 0.63 0.02	Depth to saturated zone Slope	 1.00 0.94 1.00 0.63 0.02 0.01
297241 Unadilla	 90 	 Somewhat limited Dusty 	•	 - Somewhat limited Dusty 	 0.02
297242 Shohola		Depth to saturated zone Large stones	1.00 1.00	 Very limited Large stones Depth to saturated zone Dusty	 1.00 1.00 1.00
Edgemere	 29 	 Not rated 	 	Ponding	 1.00 1.00 1.00
297243 Shohola	•	 Very limited Depth to saturated zone Large stones Slope Dusty	11.00	 Very limited Large stones Depth to saturated zone Slope	 1.00 1.00 0.63 0.01
Edgemere	 29 	 Not rated 	 	 Very limited Large stones Ponding Depth to saturated zone Slope	 1.00 1.00 1.00 1.00
297244 Lordstown	 40 	 - Very limited Large stones 	 1.00	 Very limited Large stones 	 1.00

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	Rating class and limiting features		•	
297244 Swartswood		 Very limited Large stones		 Very limited Large stones	 1.00
297247 Chenango				 Somewhat limited Gravel	0.12
297248 Chenango	Ī	Slope	0.63	•	 0.63 0.12
297249 Chenango		Slope	11.00	•	 1.00 0.12
297253 Craigsville	İ	Flooding Large stones Dusty	1.00 1.00 0.01	Dusty	 1.00 0.01
Wyoming		Very limited Large stones	11.00	 Very limited Large stones Gravel	 1.00 0.06
297254 Pits, shale	 40 	•	 	 Not rated 	
Pits, gravel	40	•		Not rated	į
298049 Wurtsboro, extremely stony	Ī	Large stones	1.00 0.98	•	 1.00 0.75
298050 Wurtsboro, extremely stony	 60 	Large stones Depth to	 1.00 0.98	=	 1.00 0.75
Swartswood, extremely stony	 40 	· -	 1.00	 Very limited Large stones 	 1.00
298051 Wurtsboro, extremely stony	 60 	Large stones Depth to saturated zone	 1.00 0.98 0.63	Depth to saturated zone	 1.00 0.75 0.63

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	Rating class and limiting features		Rating class and limiting features	•
298051 Swartswood, extremely stony		Large stones	 1.00 0.63		 1.00 0.63
298075 Colonie	 80 	 Somewhat limited Too sandy	 0.19	 Somewhat limited Too sandy	 0.19
298188 Lackawanna, extremely stony		Slope Large stones	 1.00 1.00 0.01	Slope	 1.00 1.00 0.01
298189 Lackawanna, extremely stony	 85 	Large stones Slope	 1.00 0.63 0.01	Slope	 1.00 0.63 0.01
298221 Swartswood, extremely stony	 90 	•	 1.00	 Very limited Large stones	1 1 1 1 1 1 1 1 1 1
298222 Swartswood, extremely stony	 90 	Large stones	 1.00 0.63		 1.00 0.63
298223 Swartswood, extremely stony	 85 	Slope	 1.00 1.00		 1.00 1.00
298255 Delaware, rarely flooded	 80 	=	 1.00	 Not limited 	
298256 Delaware, rarely flooded	 80 	_	 1.00	 Not limited 	
298257 Wallpack		Slope	0.63	•	 0.63 0.02
298258 Wallpack	l	Slope	1.00 0.02	 Very limited Slope Dusty 	 1.00 0.02

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct.			Picnic areas		
	map	· —		 Rating class and limiting features 		
298259 Wallpack, extremely stony		Large stones	 1.00 0.02	•	 1.00 0.02	
298260 Wallpack, extremely stony		Large stones Slope	1.00 0.63	 - Very limited Large stones Slope Dusty	 1.00 0.63 0.02	
298261 Wallpack	 85 		 0.02	 Somewhat limited Dusty	10.02	
298262 Wallpack, extremely stony		Slope Large stones	11.00	•	 1.00 1.00 0.02	
298265 Venango, extremely stony	 90 	Depth to saturated zone Large stones	1.00 	Depth to saturated zone	 1.00 1.00 	
298266 Venango, extremely stony	 85 	Depth to Saturated zone Large stones Slope	1.00 1.00 0.63	Depth to saturated zone Slope	 1.00 1.00 0.63 0.02	
298409 Swartswood, extremely stony	 90 	 Very limited Large stones	 1.00	 Very limited Large stones	 1.00	
298411 Swartswood, extremely stony	 90 	 - Very limited Large stones Slope	 1.00 0.63	 Very limited Large stones Slope	 1.00 0.63	
298413 Swartswood, extremely stony	 85 	 Very limited Slope Large stones	 1.00 1.00	•	 1.00 1.00	
318498 Hazen, very stony	 60 	 Somewhat limited Large stones 	 0.19 	 Somewhat limited Large stones 	 0.19	

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	Rating class and limiting features		=	
318498 Hoosic, very stony		 Somewhat limited Large stones 		 Somewhat limited Gravel Large stones	 0.61 0.19
318533 Hazen, very stony	 50 	 Somewhat limited Large stones	•	 Somewhat limited Large stones	 0.19
Hoosic, very stony		 Somewhat limited Large stones 		 Somewhat limited Gravel Large stones	 0.61 0.19
319783 Catden	 85 	 Not rated 	 	 Not rated 	
319784 Fredon, very stony		 Very limited Depth to saturated zone Large stones Dusty	1.00 	 Somewhat limited Depth to saturated zone Large stones Dusty	 0.96 0.19 0.02
Halsey, very stony	 40 	Depth to saturated zone Ponding	1.00 		 1.00 1.00 0.19 0.02
543222 Andover, extremely stony	 55 	Depth to saturated zone Large stones	1.00 1.00	 - Very limited Large stones Depth to saturated zone Dusty	 1.00 1.00 0.03
Buchanan, extremely stony		· -	1.00 0.81	Depth to saturated zone Dusty	 1.00 0.48 0.03
543243 Berks	 65 	 Very limited Slope Gravel Dusty	 1.00 0.46 0.04	Gravel	 1.00 0.46 0.04
Weikert	 25 	 Very limited Slope Depth to bedrock Gravel Dusty 	1.00 1.00 0.92 0.04	Depth to bedrock	 1.00 1.00 0.92 0.04

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 Picnic areas	
i :	map	Rating class and limiting features		=	
543246 Buchanan	 75 	•	0.81 	 Somewhat limited Gravel Depth to saturated zone Dusty	 0.54 0.48 0.03
543247 Buchanan, extremely stony		Large stones Depth to saturated zone Gravel	1.00 0.81 0.54	 - Very limited Large stones Gravel Depth to saturated zone Dusty	 1 1.00 0.54 0.48 0.03
543257 Chippewa	 90 	saturated zone	1.00 	 Very limited Depth to saturated zone Dusty	 1.00 0.03
543258 Chippewa	 90 	 Very limited Depth to saturated zone Dusty			 1.00 0.03
543259 Chippewa, extremely stony	90	Depth to saturated zone Large stones	11.00	•	 1.00 1.00 1.00
543271 Delaware	 90 	•	1 1.00	 Not limited 	
543276 Fluvaquents	 85 	 Very limited Depth to saturated zone Flooding Slow water movement Dusty	11.00	saturated zone Slow water movement Flooding	 1.00 1.00 0.43 1.0.40 0.03
543292 Hazleton, extremely stony		 Very limited Large stones Slope Gravel Dusty 	 1.00 1.00 0.01 0.02	Slope Gravel	 1.00 1.00 0.01 0.02

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

and soil name	 Pct. of	- I		 	
		Rating class and limiting features			
543293 Hazleton, extremely	 	 	 	 	
stony	90 	Slope Large stones Gravel	1.00 1.00 0.01	Slope	 1.00 1.00 0.01 0.02
543299 Laidig, extremely	 	 	i I	 	i I
stony	90 	Large stones Gravel	1.00 0.16	Very limited Large stones Gravel Dusty 	 1.00 0.16 0.06
	 	 	 	 	i I
stony	90 	Large stones Slope Gravel	1.00 1.00 0.16	Very limited Large stones Slope Gravel Dusty	1.00 1.00 0.16 0.06
543304 Laidig		Slope Large stones Gravel	1.00 1.00 0.16	 Very limited Large stones Slope Gravel Dusty	 1.00 1.00 0.16 0.06
Rubble land	 40 	 Not rated 	 	 Not rated 	
543318 Rubble land	 75 	 Not rated 	i 	 Not rated 	i
543327 Swartswood	 90 	Gravel	0.24	 Somewhat limited Gravel Dusty	 0.24 0.01
543328 Swartswood	 90 			Gravel	 0.63 0.24 0.01
543330 Swartswood, extremely stony	 50 	 Very limited Large stones Gravel Dusty		•	 1.00 0.01 0.01
Wurtsboro, extremely stony	30 1 	 Very limited Large stones Depth to saturated zone Dusty	 1.00 0.39 0.01	Depth to saturated zone	 1.00 0.19 0.01

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

and soil name	Pct. Of	· -		Picnic areas		
	map	Rating class and limiting features	•		•	
543331	 	I	 	I	İ	
Swartswood,	i	i I	i	i I	i	
extremely stony	50	Very limited	i	Very limited	i	
	I	Large stones	1.00	Large stones	1.00	
	I	Slope	1.00	Slope	1.00	
	I	Gravel	0.01	Gravel	0.01	
	 	Dusty 	0.01	Dusty 	0.01	
Wurtsboro,	i	İ	i	İ	i	
extremely stony	30	•		Very limited		
	!	Large stones	1.00		1.00	
	!	Slope	1.00	•	1.00	
	!	Depth to		Depth to	0.19	
	!	saturated zone		saturated zone	•	
	 	Dusty 	0.01 	Dusty 	0.01 	
543359 Volusia	 85	 Very limited		 Very limited		
VOIUSIA	1 02	Depth to		Depth to	11.00	
	:	saturated zone		saturated zone	1	
	<u> </u>	Dusty	•	Dusty	10.03	
	<u> </u>	Gravel	10.01	· <u>-</u>	10.01	
	i	Graver	1	Graver	1	
543360 Volusia, extremely	 	 	 	 	1	
stony	85	Very limited	i	Very limited	i	
-	Ì	Depth to	11.00	Large stones	11.00	
	I	saturated zone	1	Depth to	1.00	
	I	Large stones	1.00	saturated zone	1	
	 	Dusty 	10.03	Dusty 	10.03	
543374	i	i I	i	i I	i	
Wurtsboro	90	Somewhat limited		Somewhat limited	1	
	1	Depth to		Depth to	0.19	
	!	saturated zone	•	saturated zone		
	!	Gravel	10.04	•	10.04	
		Dusty 	0.01 	Dusty 	0.01 	
543375 Wurtsboro	00	 Somewhat limited		 Somewhat limited	1	
Wulcsbolo	1 30	Slope	I 10.63		10.63	
	!	Depth to	10.39		0.19	
	:	saturated zone			10.19	
	:	Gravel		saturated zone Gravel	0.04	
	i	Dusty	0.01		0.01	
	i				1	
612280	1		!		!	
Scio	1 80	Somewhat limited		Somewhat limited	10 42	
	!	Depth to		Depth to saturated zone	0.43	
	!	saturated zone	•	saturated zone Dusty	 0.02	
		Dusty 	10.02	Dusty 	10.02	
612666 Colonie	 80	 Somewhat limited	1	 Somewhat limited	1	
COTOMIE	1	Too sandy	•	Too sandy	0.19	
612668	 	 	1	 	1	
Hoosic, very stony	60	Somewhat limited	i	 Somewhat limited	i	
	I	Slope		Slope	0.63	
	I	Large stones		Gravel	0.61	
	ı	I	I	Large stones	0.19	
	•	•	•			

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	Rating class and limiting features		=	
612668 Hazen, very stony	 30 	Slope	 0.63 0.19	· •	 0.63 0.19
612724 Lordstown, very rocky	 50 	Slope	11.00	 Very limited Large stones Slope Dusty	 1.00 1.00 0.01
Wallpack, very rocky	 40 	Slope Large stones		·	 1.00 1.00 0.02
612732 Atherton, very poorly drained	 60 	Depth to saturated zone	11.00	•	 1.00 1.00 0.02
Atherton, poorly drained	 30 	 Very limited Depth to saturated zone Dusty		 Very limited Depth to saturated zone Dusty	 1.00 0.01
612738 Fluvaquents, occasionally flooded	 90 	Depth to saturated zone Flooding		•	 1.00 0.01
612753 Wallpack, aeolian mantle, very stony-	 85 	 Somewhat limited Slope Large stones	 0.63 0.19	_	 0.63 0.19
612756 Wallpack, aeolian mantle, very stony-	 85 	 Somewhat limited Large stones	 0.19	 Somewhat limited Large stones 	 0.19
612757 Wallpack, aeolian mantle, very stony-	 85 	 Very limited Slope Large stones 	 1.00 0.19	•	 1.00 0.19

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	Rating class and limiting features		Rating class and limiting features	
612767 Wellsboro, extremely stony	 85	 - -		 Very limited	
excremely scony		Large stones Slope Depth to	1.00 0.63	Large stones Slope	1.00 0.63 0.19
610760	! 	•		Dusty	0.02
612768 Wellsboro, extremely stony	I 85	 Very limited	 	 Very limited	
	 	Depth to saturated zone	İ	Large stones Depth to saturated zone Dusty	1.00 0.19 0.02
613393 Alden, extremely stony	 90	 Very limited	 	 Very limited	
-	 	saturated zone Ponding	1.00 	Large stones Ponding Depth to	1.00 1.00 1.00
	 	Slow water movement		Slow water movement	0.26 0.02
613447 Unadilla	' 85 	 Somewhat limited Dusty 	10.02	 Somewhat limited Dusty 	 0.02
613448 Unadilla	 85 	 Somewhat limited Dusty 	 0.02	 Somewhat limited Dusty 	 0.02
614075 Wurtsboro, extremely stony	 80	 Verv limited	 	' Very limited	
		Slope Large stones	1.00 1.00 0.98	Large stones Slope	1.00 1.00 0.75
Swartswood, extremely stony	 20 	Slope	 1.00 1.00		 1.00 1.00
620179 Arnot, very rocky		Large stones	1.00 1.00	 Very limited Large stones Depth to bedrock Dusty	 1.00 1.00 0.01
Lordstown, very rocky		· •		 Very limited Large stones Dusty	 1.00 0.01

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

Map unit symbol	 Pct. of	Camp areas 		 	
	_	Rating class and limiting features	Į.	=	
620180 Arnot		 Very limited Slope Large stones	 1.00 1.00	 Very limited Large stones Slope Depth to bedrock	 1.00 1.00
Lordstown	:	 Very limited Slope Large stones	 1.00 1.00	 Very limited Large stones Slope	0.01 1.00 1.00 0.01
Rock outcrop	 15	 Not rated	 	 Not rated	
620181 Arnot		Slope Large stones Depth to bedrock	1.00 1.00 1.00	Slope Depth to bedrock	 1.00 1.00 1.00 0.01
Lordstown		Slope Large stones	1.00 1.00	Slope	 1.00 1.00 0.01
Rock outcrop	 15	 Not rated	 	 Not rated	!
623089 Chippewa, extremely stony	80 	Depth to Saturated zone Ponding Large stones	1.00 1.00 1.00	Ponding Depth to saturated zone	 1.00 1.00 1.00
623109 Farmington	l I	Large stones	1.00 1.00	 Very limited Large stones Depth to bedrock Dusty	 1.00 1.00 0.02
Rock outcrop	 40	 Not rated 		 Not rated 	
624811 Galway, very rocky	 80 	 Very limited Slope Large stones Dusty	 1.00 1.00 0.01	Slope	 1.00 1.00 0.01
624813 Lackawanna, extremely stony	 85 	 - Very limited Large stones Dusty 	 1.00 0.01	-	 1.00 0.01

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	 Camp areas 		 	
	map	Rating class and limiting features		=	
624816 Lordstown, very	 	 	 	 	
rocky	50 	Large stones Slope Dusty	1.00 0.63 0.01	Slope	 1.00 0.63 0.01
Wallpack, very rocky	l	Very limited Large stones Slope	1.00 0.63	Slope	 1.00 0.63 0.02
624822	' 	 	i	 	i
Lordstown	•	STobe	11.00	· •	 1.00 0.01
Wallpack	•		11.00	·	 1.00 0.02
624823	' 	! 	i	! 	i
Lordstown	l	Slope	0.63	Slope	 0.63 0.01
Wallpack	I	Slope	10.63	Slope	 0.63 0.02
624824	! 	! 		! 	
Lordstown			•	Somewhat limited Dusty 	 0.01
Wallpack					 0.02
624826 Manlius, very rocky-	 	Slope Large stones	1.00 1.00	Slope	 1.00 1.00 0.02 0.02
Nassau, very rocky	 25 	 Very limited Slope Large stones Depth to bedrock Dusty 	1.00 1.00	Slope Depth to bedrock	 1.00 1.00 1.00 0.02
624827 Nassau, very rocky	 55 	 Very limited Large stones Depth to bedrock Dusty	1.00	Depth to bedrock	 1.00 1.00 0.02
Manlius, very rocky-	 44 	 Very limited Large stones Gravel Dusty 	 1.00 0.02 0.02	Gravel	 1.00 0.02 0.02

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	 Rating class and limiting features 		•	
624828	ı ——— I	 	 	 	
Nassau, very rocky		Large stones Depth to bedrock Slope	1.00 1.00 0.63	Depth to bedrock	0.63 0.02
Manlius, very rocky-	 44 	Large stones Slope Gravel	1.00 0.63 0.02	Slope Gravel	 1.00 0.63 0.02 0.02
624829 Nassau, very rocky		Slope Large stones	1.00 1.00 1.00 0.02	Slope Depth to bedrock	 1.00 1.00 1.00 0.02
Manlius, very rocky-		Slope Large stones Gravel	 1.00 1.00	 Very limited Large stones Slope Gravel	 1.00 1.00 0.02 0.02
624832 Nassau			1.00 1.00 1.00	 Very limited Large stones Slope Depth to bedrock Dusty	 1.00 1.00 1.00 1.00
Rock outcrop	 45	 Not rated	 	 Not rated	!
624841	 	 		 	
Oquaga		Slope Large stones	1.00 1.00	Very limited Large stones Slope Dusty	 1.00 1.00 0.01
Rock outcrop	 25 	 Not rated 	i I	 Not rated 	į
624845 Rock outcrop	 45	 Not rated	 	 Not rated	
Farmington		Slope Large stones	1.00 1.00 1.00 0.02	Slope Depth to bedrock Dusty	10.02
Galway		 Very limited Slope Large stones Dusty	 1.00	Slope	 1.00 1.00 0.01
624846 Rock outcrop		 Not rated 	•	 Not rated 	

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	Pct. Of	· •		Picnic areas 	
	map	Rating class and limiting features		=	
624846		 	 	 	<u> </u>
Arnot		Slope Large stones Depth to bedrock	1.00 1.00 1.00		1.00 1.00 1.00 0.01
Rubble land	 20 	 Not rated 	 	 Not rated 	
626816 Udifluvents, occasionally	 		 		
flooded	90 	Very limited Flooding Too sandy 	 1.00 0.76 	· •	 0.76
635458 Oquaga, very rocky	 55 		11.00	 Very limited Large stones Slope Dusty	 1.00 0.63 0.01
Lackawanna, very	 	 	 	 	
rocky	30 	Very limited Large stones Slope Dusty	11.00	Very limited Large stones Slope Dusty	 1.00 0.63 0.01
635459 Oquaga, very rocky		 Vom: limited		' Very limited	
Oquaga, Very Tocky	30 	Slope Large stones Dusty	 1.00 1.00 0.01	Large stones Slope	1.00 1.00 0.01
Lackawanna, very rocky	35 	 Very limited Slope Large stones Dusty	 1.00 1.00 0.01	Slope	 1.00 1.00 0.01
740953 Delaware, rarely flooded	 80	_		 Not limited	
T40050	 	Flooding -	1.00 	 	!
740968 Nassau, very rocky	 55 	 Very limited Large stones Depth to bedrock Slope Dusty	11.00	Depth to bedrock Slope	0.63 0.02
Manlius, very rocky-	44 44 	 Very limited Large stones Slope Gravel Dusty 	 1.00 0.63 0.02 0.02	Slope Gravel	 1.00 0.63 0.02 0.02

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct.	-		 Picnic areas	
	of map unit 			 Rating class and limiting features 	
740969 Nassau, very rocky		 - Very limited Slope Large stones Depth to bedrock	1.00 1.00	Slope	 1.00 1.00
Manlius, very rocky-		Dusty	0.02 1.00	Dusty Very limited Large stones	0.02 1.00
	 	Large stones Gravel Dusty 	1.00 0.02 0.02 	Gravel	1.00 0.02 0.02
740971 Oquaga, very rocky	 55 	· •	 1.00 0.63 0.01	Slope	 1.00 0.63 0.01
Lackawanna, very rocky	 30 	 Very limited Large stones Slope Dusty 		·	 1.00 0.63 0.01
740972 Oquaga, very rocky	 50 	 Very limited Slope Large stones Dusty	 1.00 1.00 0.01	Slope	 1.00 1.00 0.01
Lackawanna, very rocky	 35 	 Very limited Slope Large stones Dusty		·	 1.00 1.00 0.01
740974 Oquaga	 60 	 Very limited Slope Large stones Dusty	1.00 1.00 0.01	Slope Dusty	 1.00 1.00 0.01
Rock outcrop	I 25 	 Not rated 		 Not rated 	
740975 Rock outcrop	 40 	 Not rated 	 	 Not rated 	i
Arnot		Very limited Slope Large stones Depth to bedrock Dusty	1.00 1.00	Slope Depth to bedrock	 1.00 1.00 1.00 0.01
Rubble land	20 	 Not rated 	i i	 Not rated 	i i
740987 Scio	 80 	 Somewhat limited Depth to saturated zone Dusty 		 Somewhat limited Depth to saturated zone Dusty 	 0.43 0.02

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of			 Picnic areas	
i	map	Rating class and limiting features	•	Rating class and limiting features	•
740988 Udifluvents, occasionally flooded	 90	-	•	 Somewhat limited	
	 	•	1.00 0.76	· •	0.76
740991 Unadilla		 Somewhat limited Dusty 		 Somewhat limited Dusty 	 0.02
740992 Unadilla	 85 	 Somewhat limited Dusty 	 0.02	 Somewhat limited Dusty 	 0.02
740995 Wellsboro, extremely stony	 85 	Large stones Depth to	1.00 0.39	Depth to	 1.00 0.19
	 	saturated zone Dusty 	 0.02 	saturated zone Dusty 	 0.02
740996 Wellsboro, extremely stony	 85 	Large stones Slope Depth to saturated zone	1.00 0.63	Slope Depth to saturated zone	 1 1.00 0.63 0.19 1
741149 Lackawanna, extremely stony		_	11.00	 Very limited Large stones Slope Dusty	 1.00 0.63 0.01
741150 Lackawanna, extremely stony	 85 	 Very limited Slope Large stones	1.00 1.00	 Very limited Large stones Slope	 1.00
801114 Oquaga		· •		 Very limited	0.01
Rock outcrop		Dusty 	0.01 	Large stones Dusty Not rated	1.00 0.01
810906	i I	 	 	 	
Oquaga		Very limited Large stones Dusty 	1.00 0.01	Very limited Large stones Dusty 	 1.00 0.01
Rock outcrop		Not rated 	İ	Not rated 	

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	·		 	
	map	Rating class and		Rating class and limiting features	
stony		Depth to saturated zone Ponding	1.00 1.00	Ponding	 1.00 1.00 1.00
		Slow water movement	0.26 	Slow water movement	0.26
1147467	 	 	1	 	1
Arnot, very rocky		Large stones	1.00 1.00	Very limited Large stones Depth to bedrock Dusty	 1.00 1.00 0.01
Lordstown, very rocky		·	11.00	 Very limited Large stones Dusty	 1.00 0.01
1147468]]	1]]	1
Arnot	45 	Slope Large stones	1.00 1.00 1.00	Slope Depth to bedrock	 1.00 1.00 1.00
Lordstown		Slope	1.00	Slope	 1.00 1.00 0.01
Rock outcrop	15	 Not rated	İ	 Not rated	İ
1147469	 	 	1	 	
Arnot	60 	Slope Large stones	1.00 1.00 1.00	•	 1.00 1.00 1.00 0.01
Lordstown	 25 	 Very limited Slope Large stones Dusty	 1.00 1.00 0.01	Slope	 1.00 1.00 0.01
Rock outcrop	15	Not rated	į	Not rated	į
1147470 Atherton, very	 	 	 	 	
poorly drained	60 	Very limited Depth to saturated zone Ponding Dusty	11.00	Depth to saturated zone	 1.00 1.00 0.02

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	· •		Picnic areas 	
	map	Rating class and limiting features			
1147470 Atherton, poorly	 	 	 	 	
drained	30 	,	11.00	Very limited Depth to saturated zone	 1.00
	l I	Dusty 	0.01 	Dusty 	0.01
1147471 Catden	 85 	 Not rated 	 	 Not rated 	
1147474 Chippewa, extremely		 		 - -	į
s cony	80 	Very limited Depth to saturated zone	1	,go occco	1.00 1.00
	l I	_		Depth to saturated zone	1.00
	 	=			0.02
1147475 Colonie	 80	 Somewhat limited	i I	 Somewhat limited	i i
				Too sandy 	0.19
1147478 Delaware, rarely	 	 	i I	 	İ I
flooded		Very limited Flooding		Not limited 	
1147482 Fredon, very stony	 50	 Vory limited	! 	 Somewhat limited	
rreadin, very scony		Depth to	11.00	Depth to saturated zone	0.96
	 	Dusty		Large stones Dusty	0.19 0.02
Halsey, very stony		Very limited	Ì	 Very limited Ponding	 1.00
	l I	saturated zone Ponding		Depth to saturated zone	1.00
	 	Large stones	0.19	Large stones	0.19 0.02
1147485	 	 	 	- 	I I
Hazen, very stony	60 		0.19	Somewhat limited Large stones	0.19
Hoosic, very stony			 0.19	 Somewhat limited Gravel	 0.61
	 	 	i I	Large stones	0.19
1147490 Hoosic, very stony	 60	 Somewhat limited	 	, Somewhat limited	i I
	 	Slope Large stones	0.63 0.19	· •	0.63 0.61
	 		 	Large stones	0.19
Hazen, very stony	:	•	 0.63	 Somewhat limited Slope	 0.63
	İ	Large stones	0.19	•	0.03 0.19

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of			 Picnic areas 	
	map	Rating class and limiting features		Rating class and limiting features	
1147491 Hoosic, very stony	 50 	Slope	11.00	 Very limited Slope Gravel Large stones	 1.00 0.61 0.19
Otisville, very stony	 40 	Slope	 1.00 0.19	· •	 1.00 0.84 0.19
1147492 Lackawanna, extremely stony		Large stones	 1.00 0.01		 1.00 0.01
1147500 Wurtsboro, extremely stony	 90 	Large stones	 1.00 0.98	•	 1.00 0.75
1147501 Wurtsboro, extremely stony	 60 	Large stones	 1.00 0.98	•	 1.00 0.75
Swartswood, extremely stony	 40 	_	 1.00	 Very limited Large stones 	 1.00
1147502 Wurtsboro, extremely stony		Large stones Depth to saturated zone	1.00 0.98 	 Very limited Large stones Depth to saturated zone Slope	 1.00 0.75 0.63
Swartswood, extremely stony	 40 	Large stones	11.00	 Very limited Large stones Slope	1 1.00 10.63
1147527 Udorthents			0.96	 Somewhat limited Slow water movement	 0.96
Urban land		 Not rated 	! 	 Not rated 	
1147532 Udorthents	İ	 Somewhat limited Slow water	0.96 	 Somewhat limited Slow water movement 	 0.96

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of	•		 	
	map	Rating class and limiting features			
1147533 Wurtsboro, extremely stony	 80 	Slope Large stones	1.00 1.00 0.98	Slope	 1.00 1.00 0.75
Swartswood, extremely stony	 20 	Slope	 1.00 1.00		 1.00 1.00
1948749 Arnot	 90 	Depth to bedrock Gravel	11.00		 1.00 0.08 0.02
1948750 Arnot		Depth to bedrock Slope Gravel	1.00 0.63 0.08	Gravel	 1.00 0.63 0.08
1948751 Arnot	 90 	Slope Depth to bedrock Gravel	1.00 1.00 0.08		 1.00 1.00 0.08 0.02
1948774 Conotton	 90 	Gravel	0.41	 Somewhat limited Gravel Dusty	 0.41 0.04
1948775 Conotton	 95 	Slope Gravel	0.63 0.41	Gravel	 0.63 0.41 0.04
1948776 Conotton	 95 	 Very limited Slope Gravel Dusty	 1.00 0.41 0.04	Gravel	 1.00 0.41 0.04
1948777 Conotton	 95 	 Very limited Slope Gravel Dusty	 1.00 0.41 0.04	Gravel	 1.00 0.41 0.04
1948797 Manlius	 90 	 Somewhat limited Gravel Dusty 	0.15 0.03		 0.15 0.03

Table 7a.--Recreational Development, Part I (Camp and Picnic Areas)--Continued

	 Pct. of			 Picnic areas	
	map	'			
1948802 Manlius	 90 	 Somewhat limited Slope Gravel Dusty	 0.63 0.15 0.03	Gravel	 0.63 0.15 0.03
1948818 Manlius	 90 1 	•	 1.00 0.15 0.03	Gravel	 1.00 0.15 0.03
1948832 Penargyl	 90 	 Somewhat limited Dusty Gravel	 0.04 0.01		 0.04 0.01
1948846 Phelps	 90 91 	 Somewhat limited Depth to saturated zone Dusty Gravel	0.77 	saturated zone Dusty	 0.43 0.02 0.01
1948855 Udorthents, loamy	 95 1 	 Somewhat limited Depth to saturated zone Dusty	0.81 	 Somewhat limited Depth to saturated zone Dusty	 0.48 0.03
1948989 Urban land	İ	İ	İ	 Not rated 	
Delaware	25 	Very limited Flooding Dusty 	 1.00 0.01 		 0.01

Table 7b.--Recreational Development, Part II (Trail Management)

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

and soil name	Pct.	equestrian trai	nd ls	Mountain bike and off-road vehicle trails		
	map unit 	· 		 Rating class and limiting features 		
290836 Hoosic, very stony		Slope	11.00	· •	 1.00 0.19	
Otisville, very stony		Slope	11.00	· •	 1.00 0.19	
296265 Alden		Depth to saturated zone		saturated zone	 1.00 1.00	
296269 Fluvents, (alluvial land)	•	Depth to saturated zone	0.44 	saturated zone	 0.44 0.40	
296271 Alvira		Depth to saturated zone	1.00 	saturated zone	 1.00 0.53	
Watson	•	Large stones Depth to	0.53	Depth to	 0.53 0.44 	
296272 Bath	 85	 Not limited	 	 Not limited	 	
296273 Bath	 85	 Not limited	, 	 Not limited	' 	
296274 Bath	 85 		 0.50	 Not limited 	 	
296275 Bath		_		 Very limited Large stones	 1.00	
296276 Bath		Slope	1.00 0.08		 1.00 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	of		nd ls	Mountain bike and off-road vehicle trails		
		Rating class and limiting features 		 Rating class and limiting features 		
296277 Benson	 55 	 Not limited 	 	 Not limited 	 	
296278 Benson	 60 		 0.08	 Not limited 		
Rock outcrop	 20	 Not rated	! !	 Not rated	į	
296279 Benson	 60 			 Very limited Slope	1 1 1 1 1 1 1 1 1 1	
Rock outcrop	 25	 Not rated 	 	 Not rated	!	
296280 Braceville	 90 	 Not limited 	 	 Not limited 	 	
296281 Braceville	 90 	 Not limited 	 	 Not limited 	i 	
296283 Buchanan	 90 	_		_	 1.00	
296288 Chippewa		 Very limited Depth to saturated zone	1.00	 Very limited Depth to saturated zone	1 1.00	
Norwich		· _	11.00	 Very limited Depth to saturated zone	 1.00	
296289 Chippewa	 47 	Large stones Depth to	1.00 1.00		 1.00 1.00	
Norwich	 47 	Large stones	 1.00 1.00 	•	 1.00 1.00 	
296295 Udorthents, cut and fill		 Not rated	 	 Not rated		
296297 Dekalb	 100 	Large stones	 1.00 0.08	•	1 1.00	
296298 Dekalb	 100 	Large stones Slope	1.00 1.00	 - Very limited Large stones Slope 	 1.00 1.00	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.		nd ls	Mountain bike and off-road vehicle trails		
		 Rating class and limiting features 		-		
296303 Hazleton		Large stones			 1.00	
296304 Holly	•	saturated zone	1.00 	saturated zone	 1.00 0.40	
296311 Lackawanna	İ	Large stones	11.00	•	 1.00 1.00	
Bath		Large stones	11.00		 1.00 1.00	
296312 Lackawanna			•	 Somewhat limited Large stones	 0.14	
296313 Lackawanna			•	 Somewhat limited Large stones 	0.14	
296315 Lackawanna		· -		 Very limited Large stones 	 1.00	
296316 Lackawanna		Large stones	 1.00 0.08	•	 1.00	
296317 Laidig	 100 	 Very limited Large stones	•	 Very limited Large stones	1 1.00	
296326 Lordstown	 85 	_	 1.00	 Very limited Large stones 	1 1.00	
296327 Lordstown	 85 	Large stones	 1.00 0.08		 1.00	
296328 Lordstown	 40 	•	 1.00 1.00	•	 1.00 1.00	
Oquaga		•	1.00 1.00	•	 1.00 1.00	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name			Mountain bike and off-road vehicle trails		
	unit	Rating class and limiting features		-	
296329 Mardin			0.86	 Somewhat limited Depth to saturated zone	 0.86
296330 Mardin	•	 Somewhat limited Depth to saturated zone	0.86	 Somewhat limited Depth to saturated zone	 0.86
296331 Mardin	•		0.86 		 0.86 0.53
296332 Mardin		Depth to saturated zone Large stones	0.86 	saturated zone Large stones	 0.86 0.53
296335 Meckesville	 100 	 Not limited 	 	 Not limited 	
296337 Meckesville		Large stones		Large stones	 0.53
296338 Morris			1.00	 Very limited Depth to saturated zone	1 1.00
296339 Morris	 75 	Large stones	1.00 1.00	Depth to	 1.00 1.00
296340 Morris	 80 	Large stones Depth to	1.00 1.00		 1.00 1.00
296341 Freetown, mucky peat	 100	 Not rated	 	 Not rated	
296342 Paupack, mucky peat (shallow)		 Not rated 	 	 Not rated 	
296343 Oquaga	 50	 Not limited 	 	' Not limited 	
Lackawanna	35 	Not limited 	 	 Not limited 	i I

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name		 Foot traffic a equestrian trai		 Mountain bike a off-road vehicle t 	
	unit	Rating class and limiting features		=	
296344 Oquaga	 55	 Not limited	i 	 Not limited	i I I
Lackawanna	 30	 Not limited	 	 Not limited	
296346 Oquaga	I 50 	 Very limited Large stones	 1.00	 Very limited Large stones	 1.00
Lackawanna				 Very limited Large stones	 1.00
296347 Oquaga		Large stones			 1.00
Lackawanna	 30 	Large stones			 1.00
296348 Philo				 Somewhat limited Flooding 	 0.40
296349 Pope	 90	 Not limited	 	, Not limited	
296350 Pope	 90	 Not limited	 	 Not limited	
296351 Rexford, somewhat poorly drained	 40 	 Very limited Depth to saturated zone	11.00	 - Very limited Depth to saturated zone	 1.00
Rexford, poorly drained	 35 	•	11.00	:	 1.00
296355 Sheffield	 100 	Depth to saturated zone	11.00	saturated zone	 1.00 1.00
296363 Dystrochrepts, very stony	85	· -	 1.00 0.53	•	 1.00 0.53
296369 Wayland	 100 	saturated zone Ponding	11.00	saturated zone Ponding	 1.00 1.00 0.40

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trails		Mountain bike and off-road vehicle trails		
	map unit 			 Rating class and limiting features 		
296376 Wellsboro		Depth to saturated zone	0.86 	saturated zone	 0.86 0.14	
296379 Wellsboro		Large stones Depth to saturated zone	11.00	Depth to saturated zone	 1.00 0.86 	
296385 Wyoming	 85 	 Not limited 	! 	 Not limited 	 	
296386 Wyoming	 85 	 Not limited 	 	 Not limited 	; 	
296387 Wyoming	 85 	 Not limited 	 	 Not limited 	 	
296388 Wyoming			 0.50	 Not limited 	 	
296389 Wyoming				 Very limited Slope	 1.00	
296390 Water	 100 	' Not rated 	 	 Not rated 	 	
297185 Edgemere	 42 	 Not rated 	 	 Not rated 	 	
Shohola		Large stones	1.00 1.00		 1.00 1.00	
297186 Edgemere	 75	 Not rated 	' 	 Not rated		
297188 Manlius		Large stones			 1.00	
Arnot		Large stones			 1.00	
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	
297189 Manlius	 40 	Large stones	1.00 1.00		 1.00 1.00	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	•	Pct. Foot traffic and of equestrian trails map		Mountain bike and off-road vehicle trails	
	map unit 	' 		 Rating class and limiting features 	
297189 Arnot		-			 1.00 1.00
Rock outcrop	 15	 Not rated		 Not rated	!
297190 Braceville	 82 	Depth to	0.11	 Somewhat limited Depth to saturated zone	 0.11
297191 Wyalusing		Depth to saturated zone	1.00 	saturated zone	 1.00 0.40
297192 Pope	•	•	 0.40	 Somewhat limited Flooding	1 1 1 1 1 1 1 1 1 1
297193 Paupack	 90	 Not rated	 	 Not rated	
297196 Freetown	 94	 Not rated	 	 Not rated	
297197 Manlius	 90 			 Somewhat limited Large stones	10.53
297198 Manlius	 86 	 Somewhat limited Large stones		 Somewhat limited Large stones	1 1 1 1 1 1 1 1 1 1
297201 Oquaga	 75 	Large stones	 1.00 0.92		 1.00
297203 Delaware	 93	 Not limited	 	 Not limited	
297204 Delaware	 82	 Not limited	 	 Not limited	
297205 Delaware	 80	 Not limited	 	 Not limited 	
297209 Philo	 85 			 Somewhat limited Flooding	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
297210 Barbour	•	•		 Somewhat limited Too sandy	 0.01

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

	ı	 I			
and soil name	Pct. of map	equestrian trai		Mountain bike a off-road vehicle t 	
	unit	Rating class and limiting features		-	
297216 Wurtsboro	 92 	 Very limited Large stones Depth to saturated zone	1.00 0.32		 1.00 0.32
297217 Wurtsboro		Large stones Depth to	11.00		 1.00 0.32
297227 Arnot	I 88 	 Not limited 	 	 Not limited 	
297228 Arnot	 85 	· -	 1.00	 Not limited 	
297229 Wyoming	 90 			 Somewhat limited Large stones 	 0.08
297230 Wyoming	 90 		•	 Somewhat limited Large stones 	 0.08
297231 Wyoming	 90 	Slope	 0.92 0.08	•	 0.08
297236 Suncook	 91 	•	•	 Somewhat limited Too sandy 	 0.59
297237 Mardin	 85 	•	0.86	 Somewhat limited Depth to saturated zone	 0.86
297238 Mardin	 85 	Depth to	 0.86 	: • • · · · · · · · · · · · · · · · · ·	 0.86
297239 Mardin	 85 	•	 1.00 0.86	•	 1.00 0.86
297240 Mardin	 85 	-	1.00	Depth to	 1.00 0.86
297241 Unadilla	 90 	 Not limited 	 	 Not limited 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trai	nd ls	Mountain bike and off-road vehicle trails	
	map unit 	Rating class and limiting features		Rating class and limiting features 	
297242 Shohola		Large stones Depth to	1.00 1.00		 1.00 1.00
Edgemere	29	 Not rated		Not rated	į
297243 Shohola		Large stones	11.00		 1.00 1.00
Edgemere	 29	 Not rated	! !	 Not rated	į
297244 Lordstown		·	•	 Very limited Large stones	1 1.00
Swartswood		 Very limited Large stones		 Very limited Large stones	 1.00
297247 Chenango	 86	 Not limited	 	 Not limited	
297248 Chenango	 85 	 Not limited 	 	 Not limited 	
297249 Chenango	 90 		 0.50	 Not limited 	
297253 Craigsville	 50 	·		 Very limited Large stones	1 1 1 1 1 1 1 1 1 1
Wyoming	 40 	·		 Very limited Large stones	 1.00
297254 Pits, shale	 40	 Not rated	 	 Not rated	
Pits, gravel	 40	 Not rated	! !	 Not rated	!
298049 Wurtsboro, extremely stony	 90 	Large stones	1.00 0.44		 1.00 0.44
298050 Wurtsboro, extremely stony	 60 	Large stones Depth to saturated zone	1.00 0.44 	 - Very limited Large stones Depth to saturated zone	 1.00 0.44

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trai	Mountain bike and off-road vehicle trails		
	map unit 	· 		 Rating class and limiting features 	
298050 Swartswood, extremely stony	 40 	 Very limited Large stones 		 Very limited Large stones 	 1.00
298051 Wurtsboro, extremely stony		Large stones Depth to	1.00 0.44	Depth to	 1.00 0.44
Swartswood, extremely stony		 Very limited	 1.00	saturated zone Very limited Large stones 	 1.00
298075 Colonie	 80 	 Somewhat limited Too sandy	 0.19	 Somewhat limited Too sandy	 0.19
298188 Lackawanna, extremely stony	 85 	Large stones	 1.00 1.00		 1.00
298189 Lackawanna, extremely stony	 85 	 - Very limited Large stones 		 Very limited Large stones 	 1.00
298221 Swartswood, extremely stony	 90 	_	 1.00	 Very limited Large stones	 1.00
298222 Swartswood, extremely stony	, 90 	-	 1.00	 Very limited Large stones	 1.00
298223 Swartswood, extremely stony		Large stones	 1.00 1.00		 1.00
298255 Delaware, rarely flooded	I 80 	 - Not limited 	 	 Not limited 	
298256 Delaware, rarely flooded	 80 	 Not limited 	 	 Not limited 	
298257 Wallpack	 85 	Water erosion	 1.00	 Very limited Water erosion 	 1.00

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trai	nd ls	•	Mountain bike and off-road vehicle trails		
	map unit 	· 		 Rating class and limiting features 			
298258 Wallpack		Water erosion		•	 1.00		
298259 Wallpack, extremely stony	85	·	•	 Very limited Large stones 	 1.00		
298260 Wallpack, extremely stony	85	 Very limited Large stones 		 Very limited Large stones 	 1.00		
298261 Wallpack	 85 	 Not limited 	 	 Not limited 	 		
298262 Wallpack, extremely stony		Large stones		•	 1.00		
298265 Venango, extremely stony	 90 	Large stones Depth to	11.00	_	 1.00 1.00		
298266 Venango, extremely stony	 85 	Large stones Depth to	1.00 1.00 	Depth to saturated zone	 1.00 1.00 1.00		
298409 Swartswood, extremely stony	 90 	_	 1.00	 Very limited Large stones	 1.00		
298411 Swartswood, extremely stony	 90 	·	 1.00	 Very limited Large stones	 1.00		
298413 Swartswood, extremely stony	 85 	Large stones	 1.00 1.00	•	 1.00		
318498 Hazen, very stony	 60 		 0.19	 Somewhat limited Large stones	 0.19		
Hoosic, very stony			 0.19	 Somewhat limited Large stones	 0.19		

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	 Pct. of map		nd ls	 Mountain bike a off-road vehicle t 	nd rails
	unit	Rating class and limiting features		-	
318533 Hazen, very stony		 Somewhat limited Large stones		 Somewhat limited Large stones	 0.19
Hoosic, very stony		Somewhat limited Large stones			0.19
319783 Catden	 85 	 Not rated 	 	 Not rated 	
319784 Fredon, very stony			0.92 	Depth to saturated zone	 0.92 0.19
Halsey, very stony		Depth to saturated zone Ponding	1.00 1.00	Depth to saturated zone Ponding	 1.00 1.00 0.19
543222 Andover, extremely stony	l	Large stones	1.00 1.00	_	 1.00 1.00
Buchanan, extremely stony	40 	Large stones	1.00 0.11	Depth to	 1.00 0.11
543243 Berks	 65 	Slope	11.00	 Very limited Slope	1 1.00
		Very limited	•	 Very limited Slope	1 1.00
543246 Buchanan	 75 	Depth to		 Somewhat limited Depth to saturated zone	 0.11
543247 Buchanan, extremely stony	80	Large stones Depth to	 1.00 0.11 	Depth to	 1.00 0.11
543257 Chippewa		Depth to	1.00 		 1.00

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

Map unit symbol	l Pct.	 Foot traffic a	nd	 Mountain bike a	 nd		
and soil name	of map	equestrian trai		•	off-road vehicle trails		
	unit	·		Rating class and limiting features			
543258 Chippewa		· -	11.00	 Very limited Depth to saturated zone	 1.00		
543259 Chippewa, extremely stony	90	Large stones Depth to	1.00 1.00	 - Very limited Large stones Depth to saturated zone	 1.00 1.00		
543271 Delaware	 90 	 Not limited 	 	 Not limited 	 		
543276 Fluvaquents		Depth to saturated zone	1.00 	 Very limited Depth to saturated zone Flooding	 1.00 0.40		
543292 Hazleton, extremely stony		Large stones	 1.00 0.08	•	 1.00		
543293 Hazleton, extremely stony		Large stones		 Very limited Large stones Slope	 1.00 1.00		
543299 Laidig, extremely stony	 90 	 Very limited Large stones 		 Very limited Large stones	 1.00		
543300 Laidig, extremely stony	 90 	Large stones			 1.00 		
543304 Laidig		Large stones			 1.00 1.00		
Rubble land	40 	Large stones			 1.00 1.00		
543318 Rubble land		Large stones		•	 1.00 1.00		
543327 Swartswood	 90 	 Not limited 		 Not limited 	 		

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trai	nd ls	Mountain bike and off-road vehicle trails		
	map unit 	· 		 Rating class and limiting features 		
543328 Swartswood	 90	 Not limited	 	 Not limited		
543330 Swartswood, extremely stony		_		 Very limited Large stones	 1.00	
Wurtsboro, extremely stony		· -		 Very limited Large stones	1 1.00	
543331 Swartswood, extremely stony	 50 	Large stones		 Very limited Large stones 	 1.00	
Wurtsboro, extremely stony	 30 	Large stones		 Very limited Large stones 	 1.00	
543359 Volusia	 85 			 Very limited Depth to saturated zone	 1.00	
543360 Volusia, extremely stony	 85 	Large stones	11.00	 Very limited Large stones Depth to saturated zone	 1.00 1.00	
543374 Wurtsboro	 90	 Not limited	 	 Not limited		
543375 Wurtsboro	' 90 	 Not limited	 	 Not limited	 	
612280 Scio	 80 		 0.08 	 Somewhat limited Depth to saturated zone	 0.08	
612666 Colonie	 80 	 Somewhat limited Too sandy		 Somewhat limited Too sandy	0.19	
612668 Hoosic, very stony			•	 Somewhat limited Large stones	 0.19	
Hazen, very stony		Large stones	0.19	 Somewhat limited Large stones 	 0.19	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trails		Mountain bike and off-road vehicle trails		
	map unit 			Rating class and limiting features		
612724 Lordstown, very rocky	 50 	Large stones	 1.00 1.00		 1.00	
Wallpack, very rocky	 40 	Large stones	 1.00 1.00		 1.00 	
612732 Atherton, very poorly drained	 60 	Depth to saturated zone	 	saturated zone	 1.00 1.00	
Atherton, poorly drained	 30 		 1.00	 Very limited Depth to saturated zone	 1.00	
612738 Fluvaquents, occasionally flooded	 90 	•		 Very limited Depth to saturated zone	 1.00	
612753 Wallpack, aeolian mantle, very stony-	 85 		 0.19	 Somewhat limited Large stones	 0.19	
612756 Wallpack, aeolian mantle, very stony-	 85 		 0.19	 Somewhat limited Large stones	 0.19	
612757 Wallpack, aeolian mantle, very stony-	 85 	Slope	 1.00 0.19	Large stones	 0.19 	
612767 Wellsboro, extremely stony	 85 	Large stones	 1.00 1.00		 1.00 1.00	
612768 Wellsboro, extremely stony	 85 	=	 1.00	 Very limited Large stones 	 1.00	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct. Pct. of map	equestrian trails		Mountain bike and off-road vehicle trails		
	unit			 Rating class and limiting features 		
613393 Alden, extremely stony	ĺ	Large stones Depth to saturated zone	1.00 1.00 	Depth to saturated zone	 1.00 1.00 	
613447 Unadilla	 85 	 Not limited 	 	 Not limited 	 	
613448 Unadilla	 85 	 Not limited 	 	 Not limited 	i 	
614075 Wurtsboro, extremely stony		Large stones Slope Depth to	1.00 1.00	 - Very limited Large stones Depth to saturated zone	 1.00 0.44	
Swartswood, extremely stony		Large stones		 Very limited Large stones 	 1.00	
620179 Arnot, very rocky		 Very limited Large stones		 Very limited Large stones	1 1 1 1 1 1 1 1 1 1	
Lordstown, very rocky	 40 	•		 Very limited Large stones	1 1 1 1 1 1 1 1 1 1	
620180 Arnot		Large stones		 Very limited Large stones 	 1.00	
Lordstown	 40 	Large stones		 Very limited Large stones 	 1.00	
Rock outcrop	 15	 Not rated		 Not rated	1	
620181 Arnot		Large stones	1.00 1.00	Slope	 1.00 1.00	
Lordstown		Large stones	 1.00	 Very limited Large stones Slope	 1.00 1.00	
Rock outcrop	•	 Not rated 	i	 Not rated 	 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct. Of map	equestrian trails		Mountain bike and off-road vehicle trails	
	map unit 	· 		Rating class and limiting features	
623089 Chippewa, extremely stony			 	 Very limited	
Stony	80 	Large stones Depth to saturated zone	1.00 1.00 	Large stones Depth to saturated zone	1.00 1.00 1.00
623109 Farmington	 50	 Very limited	 	 Very limited	
	 	Large stones 	1.00 	Large stones 	1.00
Rock outcrop	40 	Not rated 	 	Not rated 	
624811 Galway, very rocky		Large stones		 Very limited Large stones Slope	 1.00 1.00
624813 Lackawanna, extremely stony		·	 1.00	 Very limited Large stones	 1.00
624816 Lordstown, very rocky	 50 	·		 Very limited Large stones	 1.00
Wallpack, very rocky		_		 Very limited Large stones	 1.00
624822 Lordstown			 0.50	 Not limited 	
Wallpack	 35 	Water erosion	 1.00 0.50	•	 1.00
624823 Lordstown	I 50	 Not limited	 	 Not limited	
Wallpack	 35 	-	 1.00	 Very limited Water erosion	 1.00
624824 Lordstown	 50	 Not limited	 	 Not limited	
Wallpack	1 35 	 Not limited 	! 	 Not limited 	į
624826 Manlius, very rocky-	 60 	Large stones	 1.00 1.00	•	 1.00 1.00
Nassau, very rocky	 25 	Large stones		 Very limited Large stones Slope 	 1.00 1.00

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

	l Pct.			Mountain bike and		
	of	-	ls	off-road vehicle t	raıls	
	map unit 			 Rating class and limiting features		
	i	<u>'</u>	i	<u>'</u>	i	
624827 Nassau, very rocky	 55 	_		 Very limited Large stones	 1.00	
Manlius, very rocky-		_		 Very limited Large stones 	1 1.00	
624828	' 	! 	i i	! 	i	
Nassau, very rocky		_		Very limited Large stones	 1.00	
Manlius, very rocky-	' 44 	_		Very limited Large stones	1.00	
624829	! 	! 	 	! 	i	
Nassau, very rocky	55 	Large stones		 Very limited Large stones 	 1.00	
Manlius, very rocky-	 44 	Large stones		 Very limited Large stones 	 1.00	
624832	 	 	 	 		
Nassau	50 	Large stones	11.00	Very limited Large stones Slope	 1.00 1.00	
Rock outcrop	 45	 Not rated 	 	 Not rated 	 	
624841	! 	! 	 	! 	i	
Oquaga	 60 	Large stones	1.00	 Very limited Large stones Slope	 1.00 1.00	
Rock outcrop	 25 	 Not rated 	 	 Not rated 	 	
624845 Rock outcrop	 45 	 Not rated 	 	 Not rated 	 	
Farmington	35 	Large stones Water erosion	11.00	Water erosion	 1.00 1.00	
Galway	 20 	Large stones	 1.00 1.00	=	 1.00 	
624846 Rock outcrop	 40	 Not rated	 	 Not rated	 	
Arnot	 30 	Large stones		-	 1.00 1.00	
Rubble land	I 20 	 Not rated 	 	 Not rated 	 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trai		Mountain bike and off-road vehicle trails		
	map unit 	· 		 Rating class and limiting features 		
626816 Udifluvents, occasionally flooded			 0.76	 Somewhat limited Too sandy	 0.76	
635458 Oquaga, very rocky	 55	 Very limited	 	 Very limited	 	
Lackawanna, very	I I	 	 	Large stones -	1.00 	
rocky		· -		Very limited Large stones 	 1.00 	
635459 Oquaga, very rocky		Large stones	•	 Very limited Large stones 	 1.00 	
Lackawanna, very rocky	 35 	Large stones	 1.00 1.00	•	 1.00	
740953 Delaware, rarely flooded	 80 	 Not limited 	 	 Not limited 	 	
740968 Nassau, very rocky		_		 Very limited Large stones	 1.00	
Manlius, very rocky-	 44 			 Very limited Large stones 	 1.00	
740969 Nassau, very rocky	 55 	Large stones	 1.00 1.00	•	 1.00	
Manlius, very rocky-	 44 	Large stones	 1.00 1.00	•	 1.00 	
740971 Oquaga, very rocky				 Very limited Large stones 	 1.00	
Lackawanna, very rocky		_		 Very limited Large stones 	 1.00	
740972 Oquaga, very rocky		Large stones		 Very limited Large stones 	 1.00 	
Lackawanna, very rocky	 35 	Large stones Slope	1.00 1.00	•	 1.00 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

	<u> </u>	 I		 I	
and soil name	Pct. Of map		nd ls	Mountain bike and off-road vehicle trails	
	unit	Rating class and limiting features 		-	
740974 Oquaga		Large stones			 1.00 1.00
Rock outcrop	25			 Not rated	<u> </u>
740975 Rock outcrop	 40	İ	 	 Not rated 	
Arnot		Large stones	11.00		 1.00 1.00
Rubble land	20	 Not rated 	! !	 Not rated 	!
740987 Scio		Depth to	0.08	 Somewhat limited Depth to saturated zone	 0.08
740988 Udifluvents, occasionally flooded		 Somewhat limited Too sandy	•	 Somewhat limited Too sandy	 0.76
740991 Unadilla	 85	 Not limited	 	 Not limited	
740992 Unadilla	 85	 Not limited	! 	 Not limited	
740995 Wellsboro, extremely stony		 - Very limited Large stones 		 - Very limited Large stones 	 1.00
740996 Wellsboro, extremely stony	 85 	Large stones	11.00	_	 1.00 1.00
741149 Lackawanna, extremely stony	 85 	_	 1.00	 Very limited Large stones 	 1.00
741150 Lackawanna, extremely stony		Large stones	 1.00 1.00		 1.00
801114 Oquaga	 75 	•	 1.00	 Very limited Large stones	 1.00
Rock outcrop	 15 	 Not rated 	 	 Not rated 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

				i		
and soil name	 Pct. of map	equestrian trai		Mountain bike and off-road vehicle trails		
	unit	Rating class and limiting features		-		
810906 Oquaga	 75 	 Very limited Large stones		 Very limited Large stones	 1.00	
Rock outcrop	1 15	 Not rated		 Not rated	į	
1147465 Alden, extremely stony		Large stones Depth to saturated zone	1.00 1.00	Depth to saturated zone	 1.00 1.00 1.00	
1147467	<u>'</u>	I	<u> </u>	! 	i	
Arnot, very rocky		 Very limited Large stones 		 Very limited Large stones 	 1.00	
Lordstown, very rocky	 40		 	 Very limited	 	
	 	Large stones 	1.00 	Large stones 	1.00 	
1147468	I	I	I	I	I	
Arnot		Large stones		Very limited Large stones 	 1.00 	
Lordstown		Large stones		 Very limited Large stones 	 1.00 	
Rock outcrop	15 	 Not rated 	 	 Not rated 	i i	
1147469 Arnot	:	Large stones Slope	11.00	•	 1.00 1.00	
Lordstown	İ	Large stones	1.00	_	 1.00 1.00	
Rock outcrop	15 	Not rated	i I	Not rated 	İ I	
1147470 Atherton, very poorly drained		Depth to saturated zone	1.00 	saturated zone	 1.00 1.00	
Atherton, poorly drained		-	11.00	 Very limited Depth to saturated zone	 1.00	
1147471 Catden	 85 	 Not rated 	 	 Not rated 	! 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	Pct.	equestrian trai		Mountain bike a	
	map unit 	· 		 Rating class and limiting features 	
1147474 Chippewa, extremely stony		•	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00
1147475 Colonie	 80 	 Somewhat limited Too sandy	 0.19	 Somewhat limited Too sandy	 0.19
1147478 Delaware, rarely flooded	 80 	 Not limited 	 	 Not limited 	
1147482 Fredon, very stony	 50 	 Somewhat limited Depth to saturated zone Large stones		 Somewhat limited Depth to saturated zone Large stones	 0.92 0.19
Halsey, very stony	 40 	Depth to saturated zone Ponding	•	Ponding	 1.00 1.00 0.19
1147485 Hazen, very stony	 60 	 Somewhat limited Large stones		 Somewhat limited Large stones	 0.19
Hoosic, very stony	 35 	 Somewhat limited Large stones	 0.19	 Somewhat limited Large stones	 0.19
1147490 Hoosic, very stony	 60 		 0.19	 Somewhat limited Large stones	 0.19
Hazen, very stony	 30 	 Somewhat limited Large stones		 Somewhat limited Large stones	0.19
1147491 Hoosic, very stony	 50 	 Very limited Slope Large stones	 1.00 0.19	·	 1.00 0.19
Otisville, very stony	 40 		11.00	 Very limited Slope Large stones	 1.00 0.19
1147492 Lackawanna, extremely stony	 85 	 Very limited Large stones 	 1.00	 Very limited Large stones 	 1.00

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	 Pct. of		nd ls	Mountain bike and off-road vehicle trails		
	map unit 	· 		 Rating class and limiting features 		
1147500 Wurtsboro, extremely stony	 90 	Large stones	1.00 0.44	 Very limited Large stones Depth to saturated zone	 1.00 0.44	
1147501 Wurtsboro, extremely stony		Large stones	1.00 0.44		 1.00 0.44	
Swartswood, extremely stony		 Very limited Large stones		 Very limited Large stones	1 1.00	
1147502 Wurtsboro, extremely stony		Large stones	1.00 0.44		 1.00 0.44	
Swartswood, extremely stony	 40 	 Very limited Large stones		 Very limited Large stones	1 1 1 1 1 1 1 1 1 1	
1147527 Udorthents	 60 	 Not limited 	 	 Not limited 	 	
Urban land	40	Not rated	i I	Not rated	į	
1147532 Udorthents	 100	 Not limited	 	 Not limited		
1147533 Wurtsboro, extremely stony		Large stones Slope Depth to	1.00 1.00		 1.00 0.44	
Swartswood, extremely stony		Large stones		=	 1.00	
1948749 Arnot	 90	 Not limited	! !	 Not limited	į	
1948750 Arnot	I I	 	l I	Not limited 	 	
1948751 Arnot		Slope	0.50	 Not limited 	 	

Table 7b.--Recreational Development, Part II (Trail Management)--Continued

and soil name	of	•		Mountain bike a off-road vehicle t	
		 Rating class and limiting features 		-	
1948774 Conotton	 90	 Not limited	 	 Not limited	
1948775 Conotton	 95	 Not limited	 	 Not limited	
1948776 Conotton	 95 		 0.50	 Not limited 	
1948777 Conotton	 95 		 1.00	 Very limited Slope	 1.00
1948797 Manlius	 90	 Not limited	 	 Not limited	
1948802 Manlius	 90	 Not limited	' 	 Not limited	
1948818 Manlius	 90	•	 0.50	 Not limited 	
1948832 Penargyl	 90	 Not limited	 	 Not limited	
1948846 Phelps		Depth to	10.08	 Somewhat limited Depth to saturated zone	 0.08
1948855 Udorthents, loamy			•	 Somewhat limited Depth to saturated zone	 0.11
1948989 Urban land	 65	 Not rated	! 	 Not rated	
Delaware	 25 	 Not limited 	 	 Not limited 	

Table 8.--Dwellings and Small Commercial Buildings

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

	 Pct. of map	basements	ut	 Dwellings with basements 		Small commercial buildings 		
	unit 	· 		Rating class and limiting features		-		
290836 Hoosic, very stony	 50 	-	 1.00	• •	 1.00	 Very limited Slope 	 1.00	
Otisville, very stony	 40 		 1.00	 Very limited Slope 	 1.00	 Very limited Slope 	 1.00	
296265 Alden	 100 	Ponding	 1.00 1.00	Ponding	 1.00 1.00	•	 1.00 1.00	
296269 Fluvents, (alluvial land)		Flooding	1.00 0.98	•		 - Very limited Flooding Depth to saturated zone	 1.00 0.98	
296271 Alvira	 55 	Depth to saturated zone	11.00	Depth to saturated zone	 1.00 	 Very limited Depth to saturated zone Slope 	 1.00 0.50	
Watson	 35 	Depth to saturated zone Shrink-swell	 0.98 0.50 0.50	saturated zone Shrink-swell	 1.00 1.00 0.50	saturated zone	 0.98 0.50 0.50	
296272 Bath	 85 	cemented pan	 0.50 0.28	saturated zone	 1.00 	 Somewhat limited Slope Depth to saturated zone 	 0.50 0.28 	
296273 Bath	 85 	Depth to thin cemented pan	 0.63 0.50 0.28	saturated zone	 1.00 0.63 	Depth to	 1.00 0.28 	

Table 8.--Dwellings and Small Commercial Buildings--Continued

Map unit symbol and soil name	Pct. of map	basements	ut	 Dwellings with bas 	ements	Small commerci buildings	.al
	map unit 	1 		Rating class and limiting features 		Rating class and limiting features 	
296274 Bath	 85 	Slope Depth to thin cemented pan	1.00 0.50	Slope Depth to saturated zone	 1.00 1.00 	•	 1.00 0.28
296275 Bath	 90 	cemented pan	 0.50 0.28 	saturated zone	 1.00 	 Somewhat limited Slope Depth to saturated zone 	 0.50 0.28
296276 Bath	90 	Depth to thin cemented pan	 1.00 1.50 1.28	saturated zone	1.00	Depth to	 1.00 0.28
296277 Benson	 55 	bedrock	1.00 	bedrock	 1.00 0.02	bedrock	 1.00 0.02
296278 Benson	 60 	bedrock Slope	11.00	bedrock Slope	1.00	Depth to hard bedrock	 1.00 1.00 0.02
Rock outcrop	 20 	 Not rated 	 	 Not rated 	 	 Not rated 	
296279 Benson	 60 	Slope Depth to hard bedrock	1.00 1.00	Slope Depth to hard bedrock	1.00 1.00	Depth to hard bedrock	 1.00 1.00 0.02
Rock outcrop	25	 Not rated 	! !	 Not rated 	<u> </u>	 Not rated 	
296280 Braceville	90 1 	Depth to thin cemented pan	0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.07
296281 Braceville	90 	Depth to thin cemented pan	 0.50 0.07 	saturated zone	 1.00 	 Somewhat limited Slope Depth to saturated zone 	 0.50 0.07

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. of map	basements	ut	Dwellings with bas	ements	Small commerci buildings	al
	map unit 			Rating class and limiting features		Rating class and limiting features	
296283 Buchanan	 90 	cemented pan	 0.50 0.07	saturated zone	 1.00 	 Somewhat limited Slope Depth to saturated zone	 0.12 0.07
296288 Chippewa	 48 	Depth to saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
Norwich	 48 	Depth to saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
296289 Chippewa	 47 	Depth to saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
Norwich	 47 	Depth to saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
296295 Udorthents, cut and fill		 - Not rated 	 	 Not rated 	 	 Not rated 	
296297 Dekalb	 100 	bedrock	 1.00 0.29 0.03	bedrock Slope	 1.00 1.00 0.03	Depth to hard bedrock	 1.00 0.29 0.03
296298 Dekalb	 100 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.29 0.03	Depth to hard bedrock	 1.00 1.00 0.03	Depth to hard bedrock	 1.00 0.29 0.03
296303 Hazleton	 100 	 Very limited Slope Large stones 	 1.00 0.07 	•	 1.00 0.07 0.01	Large stones	 1.00 0.07

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	 Small commercial buildings		
	map unit 			Rating class and limiting features		Rating class and limiting features		
296304 Holly	 100 	Flooding	1.00 1.00	•	 1.00 1.00	•	 1.00 1.00	
296311	 	 	! !	 	!	 	!	
Lackawanna	40 	Slope	 1.00 0.50 0.24	Depth to saturated zone	 1.00 1.00 	· -	 1.00 0.24 	
Bath	 30 	 Very limited Slope Depth to thin cemented pan Depth to saturated zone	 1.00 0.50 0.28	Depth to saturated zone	 1.00 1.00 	•	 1.00 0.28 	
296312	! !	 				 		
Lackawanna	80 	Somewhat limited Depth to thin cemented pan Depth to saturated zone	 0.50 0.24 	saturated zone	 1.00 	Somewhat limited Slope Depth to saturated zone 	 0.50 0.24 	
296313 Lackawanna	 80 81 	 Somewhat limited Slope Depth to thin cemented pan Depth to saturated zone	0.63 0.50	saturated zone Slope	1.00	Depth to	 1.00 0.24 	
296315	 	 	 	 	 	 	1	
Lackawanna	80 	Somewhat limited Depth to thin cemented pan Depth to saturated zone	10.50	saturated zone	 1.00 	Somewhat limited Slope Depth to saturated zone	 0.50 0.24 	
296316	 	 				 	!	
Lackawanna	80 	Very limited Slope Depth to thin cemented pan Depth to saturated zone	 1.00 0.50 0.24	saturated zone Slope	 1.00 1.00 	Depth to	 1.00 0.24 	
296317	! 	1 		 		1 		
Laidig	100 	Somewhat limited Depth to thin cemented pan	 0.50 	Very limited Depth to saturated zone 	 1.00 	Not limited 	 	

Table 8.--Dwellings and Small Commercial Buildings--Continued

Map unit symbol and soil name	Pct. of map	basements	ut	Dwellings with bas	ements	Small commercial buildings		
	map unit 	· 		Rating class and limiting features 		 Rating class and limiting features 		
296326 Lordstown	 85 	 Somewhat limited Depth to hard bedrock Large stones	 0.46 0.10	bedrock	 1.00 0.10	Depth to hard	 0.50 0.46 0.10	
296327 Lordstown	 85 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.46 0.10	bedrock Slope	11.00	Depth to hard bedrock	 1.00 0.46 	
296328 Lordstown	 40 	 Very limited Slope Depth to hard bedrock	 1.00 0.46	· •	 1.00 1.00	•	 1.00 0.46	
Oquaga	35 	 Very limited Slope Depth to hard bedrock	 1.00 0.46 	•	 1.00 1.00	•	 1.00 0.46	
296329 Mardin	 85 	 Very limited Depth to saturated zone Depth to thin cemented pan	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone Slope 	 1.00 0.50	
296330 Mardin	 85 	 Very limited Depth to saturated zone Slope Depth to thin cemented pan	 1.00 0.63 0.50	saturated zone Slope	 1.00 0.63	Depth to	 1.00 1.00 	
296331 Mardin	 85 	 Very limited Depth to saturated zone Depth to thin cemented pan	11.00	saturated zone	 1.00 	 Very limited Depth to saturated zone Slope	 1.00 0.50	
296332 Mardin	 87 	 Very limited Depth to saturated zone Slope Depth to thin cemented pan	11.00	saturated zone	11.00	Depth to	 1.00 1.00 	
296335 Meckesville	 100 101 101	 Somewhat limited Slope Depth to thin cemented pan	 0.63 0.50 	•	0.98 0.63	i -	 1.00 	

Table 8.--Dwellings and Small Commercial Buildings--Continued

Map unit symbol and soil name	Pct. of map	basements	ut	Dwellings with bas	ements	Small commerci buildings	al
	map unit 			Rating class and limiting features 		 Rating class and limiting features 	
296337 Meckesville	 100 	Slope	 1.00 0.50	•	 1.00 0.98	•	 1.00
296338 Morris	 80 	Depth to saturated zone	 1.00 0.50	saturated zone	1 1.00	 Very limited Depth to saturated zone Slope	 1.00 0.50
296339 Morris	 75 	saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
296340 Morris	 80 	Depth to Saturated zone Depth to thin cemented pan	 1.00 0.50 	saturated zone Slope 	 1.00 0.16	saturated zone	 1.00 1.00
296341 Freetown, mucky peat	 100 	Ponding	 1.00 1.00	•	 1.00 1.00	•	 1.00 1.00
296342 Paupack, mucky peat (shallow)		Ponding Subsidence Depth to	1.00 1.00 1.00	Subsidence Depth to	 1.00 1.00 1.00	Subsidence	 1.00 1.00 1.00
296343 Oquaga	50 		 0.46 	 Very limited Depth to hard bedrock 	 1.00 	 Somewhat limited Slope Depth to hard bedrock	 0.50 0.46
Lackawanna	 35 		10.50	saturated zone	 1.00 	 Somewhat limited	 0.50 0.24
296344 Oquaga	 55 	•	 0.63 0.46 	•	1.00 0.63	Depth to hard	 1.00 0.46

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings			
	unit 			Rating class and limiting features		Rating class and limiting features			
296344 Lackawanna	 30 	 Somewhat limited Slope Depth to thin cemented pan Depth to saturated zone	 0.63 0.50 0.24	saturated zone Slope	 1.00 0.63	Depth to	 1.00 0.24 		
296346 Oquaga	 50 	 Somewhat limited Depth to hard bedrock	 0.46	 Very limited Depth to hard bedrock	 1.00	 Somewhat limited Depth to hard bedrock	 0.46		
Lackawanna	 35 	 Somewhat limited Depth to thin cemented pan Depth to saturated zone	 0.50 0.24	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.24 		
296347	 	! 	<u> </u>	! 	<u> </u>	! 	1		
Oquaga	60 	Very limited Slope Depth to hard bedrock	 1.00 0.46 	· =	 1.00 1.00	Depth to hard	 1.00 0.46		
Lackawanna	30 	 Very limited Slope Depth to thin cemented pan Depth to saturated zone	 1.00 0.50 0.24	saturated zone Slope	 1.00 1.00 1.00	Depth to	 1.00 0.24 		
296348 Philo	 85 	 Very limited Flooding Depth to saturated zone	 1.00 0.07		 1.00 1.00		 1.00 0.07		
296349 Pope	 90 	 Very limited Flooding 		 Very limited Flooding Depth to saturated zone	 1.00 0.15	•	 1.00		
296350 Pope	 90 	 Very limited Flooding 	 1.00 	 Very limited Flooding Depth to saturated zone	 1.00 0.15	•	 1.00 		
296351 Rexford, somewhat poorly drained	 40 	 Very limited Depth to saturated zone Depth to thin cemented pan	 1.00 0.50	saturated zone	 1.00 	 - Very limited Depth to saturated zone 	 1.00 		

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	 Small commercial buildings	
	unit 			Rating class and limiting features		Rating class and limiting features	
296351 Rexford, poorly drained	 	Depth to saturated zone	 1.00 0.50	saturated zone	11.00	 - Very limited Depth to saturated zone 	 1.00
296355 Sheffield	 100 	Ponding	 1.00 1.00	•	 1.00 1.00	•	 1.00 1.00
296363 Dystrochrepts, very stony		•	 1.00 	•	 1.00 1.00	•	 1.00
296369 Wayland	 100 	Ponding Flooding	1.00 1.00 1.00	Flooding	1.00 1.00 1.00	Flooding	 1.00 1.00 1.00
296376 Wellsboro	 80 	Depth to saturated zone		saturated zone		 Very limited Depth to saturated zone Slope 	 1.00 0.50
296379 Wellsboro	 85 	Depth to saturated zone Slope	11.00	Depth to saturated zone Slope	11.00	Depth to	 1.00 1.00
296385 Wyoming	 85	 Not limited		 Not limited	 	 Not limited	!
296386 Wyoming	 85 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.50
296387 Wyoming	 85 		 0.63	 Somewhat limited Slope	 0.63	 Very limited Slope 	 1.00
296388 Wyoming	 85 	· -		 	 1.00	 - Very limited Slope 	 1.00
296389 Wyoming	 100 	•		 - Very limited Slope 	 1.00	 - Very limited Slope 	 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings	al
	map unit 	1 		 Rating class and limiting features 		Rating class and limiting features 	
296390 Water	 100	 Not rated	 	 Not rated		 Not rated	
005105	!		ļ.	!	!	!	1
297185 Edgemere		Ponding Depth to saturated zone	 1.00 1.00 0.50	Depth to saturated zone	 1.00 1.00 	Depth to	 1.00 1.00 0.50
Shohola	42 	Depth to saturated zone Depth to thin cemented pan	 1.00 0.50 0.04	saturated zone Slope 	 1.00 0.04 	saturated zone	 1.00 1.00
297186 Edgemere	 75 	Ponding Depth to saturated zone	1.00 1.00	Depth to saturated zone	 1.00 1.00 	•	 1.00 1.00
297188 Manlius	 40 	Slope	 1.00 0.46	-	 1.00 1.00	•	 1.00 0.46
Arnot	 35 	Slope Depth to hard bedrock	 1.00 1.00 0.10	Depth to hard bedrock	 1.00 1.00 0.10	Depth to hard bedrock	 1.00 1.00 0.10
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	
297189 Manlius	 40 	 Very limited Slope Depth to hard bedrock	 1.00 0.46		 1.00 1.00	•	 1.00 0.46
Arnot	 35 	Slope	 1.00 1.00 0.10	Depth to hard bedrock	 1.00 1.00 0.10	Depth to hard bedrock	 1.00 1.00 0.10
Rock outcrop	 15	 Not rated	 	 Not rated		 Not rated	
297190 Braceville	 82 	Depth to saturated zone		 Very limited Depth to saturated zone 	 1.00 	 Somewhat limited Depth to saturated zone 	 0.81

Table 8.--Dwellings and Small Commercial Buildings--Continued

Map unit symbol and soil name	Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings	lal
	unit unit 			Rating class and limiting features		Rating class and limiting features 	
297191 Wyalusing	 85 	 Very limited Flooding Depth to saturated zone	 1.00 1.00		 1.00 1.00	•	 1.00 1.00
297192 Pope	 95 	 Very limited Flooding	 1.00	 Very limited Flooding	 1.00	 Very limited Flooding	 1.00
297193 Paupack	 90 	 Very limited Ponding Subsidence Depth to saturated zone	 1.00 1.00 1.00	Subsidence	 1.00 1.00 1.00	Subsidence	 1.00 1.00 1.00
297196 Freetown	 94 	 Very limited Ponding Depth to saturated zone	 1.00 1.00	•	 1.00 1.00	•	 1.00 1.00
297197 Manlius	 90 	 Somewhat limited Depth to hard bedrock 	 0.46 	 Very limited Depth to hard bedrock 	 1.00	 Somewhat limited Slope Depth to hard bedrock	 0.50 0.46
297198 Manlius	 86 	 Somewhat limited Slope Depth to hard bedrock	 0.63 0.46	•	 1.00 0.63	Depth to hard	 1.00 0.46
297201 Oquaga	 75 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.29 0.02	Depth to hard bedrock	 1.00 1.00 0.02	Depth to hard bedrock	 1.00 0.29 0.02
297203 Delaware	 93 	 Very limited Flooding	1 1 1 1 1 1 1 1 1 1	 Very limited Flooding	1 1 1 1 1 1 1 1 1 1	 Very limited Flooding	1 1 1 1 1 1 1 1 1 1
297204 Delaware	 82 	 Very limited Flooding 	 1.00	 Very limited Flooding 	 1.00	 Very limited Flooding Slope	 1.00 0.50
297205 Delaware	 80 	 Very limited Flooding Slope	 1.00 0.96	·	 1.00 0.96	•	 1.00 1.00
297209 Philo	 85 85 	 Very limited Flooding Depth to saturated zone 	 1.00 0.07	•	 1.00 1.00	•	 1.00 0.07

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. of map	basements	ut	Dwellings with bas	ements	Small commerci buildings	.al
	map unit 	· 		Rating class and limiting features 		Rating class and limiting features 	
297210 Barbour	 85 	 Very limited Flooding 	 1.00 	 Very limited Flooding Depth to saturated zone	 1.00 0.35	•	 1.00
297216 Wurtsboro	 92 	 Somewhat limited Depth to saturated zone Depth to thin cemented pan	 0.95 0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.95
297217 Wurtsboro	 88 	 Somewhat limited Depth to saturated zone Slope Depth to thin cemented pan	 0.95 0.63 0.50	saturated zone Slope	 1.00 0.63	Depth to	 1.00 0.95
297227 Arnot	 88 	 Very limited Depth to hard bedrock Slope	 1.00 0.04	bedrock	 1.00 0.04	bedrock	 1.00 1.00
297228 Arnot	 85 	 Very limited Slope Depth to hard bedrock	 1.00 1.00	· •	 1.00 1.00	•	 1.00 1.00
297229 Wyoming	 90 	 Somewhat limited Large stones 	 0.26	 Somewhat limited Large stones 	 0.26	 Somewhat limited Large stones Slope	 0.26 0.12
297230 Wyoming	 90 	 Somewhat limited Slope 	 0.63	 Somewhat limited Slope 	 0.63	 Very limited Slope 	 1.00
297231 Wyoming	 90 	 Very limited Slope Large stones	 1.00 0.53	-	 1.00 0.53	•	 1.00 0.53
297236 Suncook	 91 	 Very limited Flooding	 1.00	 Very limited Flooding 		 Very limited Flooding 	 1.00
297237 Mardin	85 	 Very limited Depth to saturated zone Depth to thin cemented pan	11.00	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. Of map	basements	out	Dwellings with bas	ements	Small commerci	al
	unit	Rating class and		Rating class and limiting features		•	
297238 Mardin	 	Depth to saturated zone Slope	11.00	Depth to saturated zone Slope	11.00	· •	 1.00 1.00
297239 Mardin		Depth to saturated zone	11.00	Depth to saturated zone	11.00	 Very limited Depth to saturated zone 	 1.00
297240 Mardin	l I	Depth to saturated zone Slope	1.00 	Depth to saturated zone Slope	11.00	· •	 1.00 1.00
297241 Unadilla	 90 	 Not limited 	 	 Not limited	; ! !	 Not limited 	
297242 Shohola	 62 	Depth to saturated zone	11.00	Depth to saturated zone	11.00	 Very limited Depth to saturated zone 	 1.00
Edgemere	 29 	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00	 Very limited Ponding Depth to saturated zone 	 1.00 1.00
297243 Shohola	 62 	 Very limited Depth to saturated zone Slope Depth to thin cemented pan	1.00	saturated zone Slope	1.00	Depth to	 1.00 1.00
Edgemere	 29 	 Very limited Ponding Depth to saturated zone Slope Depth to thin cemented pan	1.00 1.00	Depth to saturated zone Slope	1.00 1.00	Slope Depth to	 1.00 1.00 1.00 1.00
297244 Lordstown	 40 	 Somewhat limited Depth to hard bedrock	 0.46 	 Very limited Depth to hard bedrock	 1.00	 Somewhat limited Depth to hard bedrock	 0.46

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with base 	ements	Small commerci buildings	ial
	map unit 			Rating class and limiting features 		Rating class and limiting features 	
297244 Swartswood	 35 		 0.50	 Very limited Depth to saturated zone	 1.00	 Not limited 	
297247 Chenango	 86	 Not limited	 	 Not limited	 	 Not limited	
297248 Chenango	 85 		 0.63	 Somewhat limited Slope	 0.63	 Very limited Slope	 1.00
297249 Chenango	 90 	•	 1.00	 Very limited Slope	 1.00	 Very limited Slope	 1.00
297253 Craigsville	 50 	Flooding	 1.00 0.99		 1.00 0.99		 1.00 0.99
Wyoming	40	 Not limited	! !	 Not limited	! !	 Not limited	<u> </u>
297254 Pits, shale	 40	 Not rated	 	 Not rated	' 	 Not rated	
Pits, gravel	40	 Not rated	į	 Not rated	į	 Not rated	į
298049 Wurtsboro, extremely stony	 90 	Depth to saturated zone	 0.98 0.50	saturated zone	 1.00 	 - Somewhat limited Depth to saturated zone 	 0.98
298050 Wurtsboro, extremely stony	 60 	Depth to	 0.98 0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.98
Swartswood, extremely stony	 40 		 0.50	 Not limited 	 	 Not limited 	
298051 Wurtsboro, extremely stony	 60 	Depth to saturated zone Slope	 0.98 0.63 0.50	saturated zone	 1.00 0.63 	Depth to	 1.00 0.98

Table 8.--Dwellings and Small Commercial Buildings--Continued

	Pct. of map	basements	ut	, Dwellings with bas 	ements	Small commerci buildings	al.
	unit unit 	· 		Rating class and limiting features		Rating class and limiting features	Value
298051 Swartswood, extremely stony	 	Slope	 0.63 0.50		 0.63	 - Very limited Slope 	 1.00
298075 Colonie	 80 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
298188 Lackawanna, extremely stony	 85 	Slope	 1.00 0.50	•	 1.00	 - Very limited Slope - 	 1.00
298189 Lackawanna, extremely stony	 85 	Slope	 0.63 0.50		 0.63 	 Very limited Slope 	 1.00
298221 Swartswood, extremely stony	 90 		 0.50	 - Not limited -	 	 - Not limited - -	
298222 Swartswood, extremely stony	 90 	Slope	 0.63 0.50		 0.63	 Very limited Slope 	 1.00
298223 Swartswood, extremely stony	 85 	_	 1.00 0.50		 1.00 	 	 1.00
298255 Delaware, rarely flooded	 80 	 Very limited Flooding	 1.00	 Very limited Flooding 	 1.00	 Very limited Flooding Slope	 1.00 0.50
298256 Delaware, rarely flooded	 80 	 Very limited Flooding	 1.00	 Very limited Flooding	 1.00	 Very limited Flooding	1 1.00
298257 Wallpack	 85 	 Somewhat limited Slope Depth to thin cemented pan	 0.63 0.50 		 0.63 	 Very limited Slope 	 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

	Pct. of map	basements	ut	Dwellings with bas 	ements	Small commercial buildings		
	unit unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features 		
298258 Wallpack	 85 	Slope	 1.00 0.50	•	 1.00 	 - Very limited Slope - -	 1.00 	
298259 Wallpack, extremely stony			 0.50 	 - Not limited - 	 	 Not limited 	 	
298260 Wallpack, extremely stony		Slope	 0.63 0.50	•	 0.63 	 Very limited Slope 	 1.00 	
298261 Wallpack	 85 		 0.50	 Not limited 	 	 Not limited 	 	
298262 Wallpack, extremely stony		Slope	 1.00 0.50	•	 1.00	 Very limited Slope 	 1.00	
298265 Venango, extremely stony	 90 	Depth to saturated zone	 1.00 0.50	saturated zone	 1.00 	 - Very limited Depth to saturated zone 	 1.00	
298266 Venango, extremely stony	 85 	Depth to saturated zone Slope	11.00	saturated zone	1.00	Depth to	 1.00 1.00	
298409 Swartswood, extremely stony	 90 		 0.50	 Not limited 	 	 Not limited 	 	
298411 Swartswood, extremely stony	 90 	Slope	 0.63 0.50	·	 0.63 	 Very limited Slope 	 1.00 	

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	Small commerci buildings	lal
	map unit 	· 		Rating class and limiting features		Rating class and limiting features	
298413 Swartswood, extremely stony	 85 	Slope	 1.00 0.50	•	 1.00	 Very limited Slope 	 1.00
318498 Hazen, very stony	 60 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.50
Hoosic, very stony	 35 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	1 10.50
318533 Hazen, very stony	 50 	 Not limited 	 	 Not limited 	 	 Not limited 	
Hoosic, very stony	40	Not limited	į	Not limited	į	Not limited	į
319783 Catden	 85 	Ponding Depth to saturated zone	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00 1.00
319784 Fredon, very stony	 50 	_	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to saturated zone	 1.00
Halsey, very stony	 40 	Ponding	 1.00 1.00	•	 1.00 1.00	•	 1.00 1.00
543222 Andover, extremely stony	 55 	· -	 1.00	 Very limited Depth to saturated zone		 - Very limited Depth to saturated zone	 1.00
Buchanan, extremely stony		 Somewhat limited Depth to saturated zone Depth to thin cemented pan	 0.81 0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.81
543243 Berks	 65 	· •	 1.00 0.20	•	 1.00 1.00	•	 1.00 0.20
Weikert	 25 	Slope	 1.00 1.00 	-	 1.00 1.00 	•	 1.00 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	 Small commercial buildings	
	map unit 	1 		Rating class and limiting features		Rating class and limiting features	
543246 Buchanan	 75 	Depth to saturated zone Depth to thin	0.81 0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone Slope 	 0.81 0.50
543247 Buchanan, extremely stony		Depth to saturated zone	 0.81 0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.81
543257 Chippewa	 90 1 	Depth to saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
543258 Chippewa	 90 1 	saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone Slope 	 1.00 0.12
543259 Chippewa, extremely stony		Depth to saturated zone	 1.00 0.50	saturated zone	 1.00 	 Very limited Depth to saturated zone 	 1.00
543271 Delaware	:			 - Very limited Flooding 		 Very limited Flooding 	 1.00
543276 Fluvaquents	 85 	Flooding	 1.00 1.00	•	 1.00 1.00		 1.00 1.00
543292 Hazleton, extremely stony		Slope	 1.00 0.10	Large stones	 1.00 0.10 0.08	Large stones	 1.00 0.10
543293 Hazleton, extremely stony		Slope	 1.00 0.10	· -	 1.00 0.10	· -	 1.00 0.10

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	 Small commerci buildings 	al.
	unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
543299 Laidig, extremely stony	 90 	 Somewhat limited Depth to thin cemented pan	 0.50	 Somewhat limited Depth to saturated zone	 0.90	 Not limited 	
543300 Laidig, extremely stony	 90 	Slope	 1.00 0.50	•	 1.00 0.90		 1.00
543304 Laidig	 50 	Slope	 1.00 0.50	•	 1.00 0.90		 1.00
Rubble land	 40 	 Very limited Slope Large stones	 1.00 1.00	-	 1.00 1.00		 1.00 1.00
543318 Rubble land	 75 	•	 1.00 1.00		 1.00 1.00		 1.00 1.00
543327 Swartswood	 90 	 Somewhat limited Depth to thin cemented pan	 0.50	 Somewhat limited Depth to saturated zone	 0.98	 Somewhat limited Slope 	 0.50
543328 Swartswood	 90 		 0.63 0.50		 0.98 0.63	i	 1.00
543330 Swartswood, extremely stony	 50 	 Somewhat limited Depth to thin cemented pan	 0.50	 Somewhat limited Depth to saturated zone	 0.98	 Not limited 	
Wurtsboro, extremely stony	 30 	 Somewhat limited Depth to thin cemented pan Depth to saturated zone	 0.50 0.39	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.39
543331 Swartswood, extremely stony	 50 	 - Very limited Slope Depth to thin cemented pan	 1.00 0.50	-	 1.00 0.98	·	 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings	.al
	-			Rating class and limiting features 			
543331 Wurtsboro, extremely stony	 30 	Slope Depth to thin cemented pan	1.00 0.50 0.39	saturated zone Slope	11.00	Depth to	 1.00 0.39
543359 Volusia	 85 	-	11.00	 - Very limited Depth to saturated zone 	 1.00 	: • • · · · · · · · · · · · · · · · · ·	 1.00 0.12
543360 Volusia, extremely stony	 85 	-	11.00	 Very limited Depth to saturated zone	11.00	 Very limited Depth to saturated zone	 1.00
543374 Wurtsboro	 90 	Depth to thin cemented pan	0.50 0.39	saturated zone	11.00	 Somewhat limited Slope Depth to saturated zone 	 0.50 0.39
543375 Wurtsboro	 90 	Slope Depth to thin cemented pan	0.63 0.50 0.39	Depth to saturated zone Slope	11.00	Depth to	 1.00 0.39
612280 Scio	 80 	 Somewhat limited Depth to saturated zone	0.77	 Very limited Depth to saturated zone	 1.00	 Somewhat limited Depth to saturated zone	 0.77
612666 Colonie	 80	 Not limited	 	 Not limited		 Not limited	<u> </u>
612668 Hoosic, very stony	 60 		 0.63	 Somewhat limited Slope	10.63	 Very limited Slope	1 1.00
Hazen, very stony	 30 	 Somewhat limited Slope	10.63	Somewhat limited Slope	10.63	Very limited Slope	1 1.00
612724 Lordstown, very rocky	 50 	_	1.00 0.06	•	 1.00 1.00	· -	 1.00 0.06

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	 Small commerci buildings	al.
	unit unit 			Rating class and limiting features		Rating class and limiting features	
612724 Wallpack, very rocky	 40 41 	Slope	 1.00 0.50		 1.00 	 Very limited Slope 	 1.00
612732 Atherton, very poorly drained	 60 	Ponding	 1.00 1.00	•	 1.00 1.00		 1.00 1.00
Atherton, poorly drained	 30 	 Very limited Depth to saturated zone	1 1.00	 Very limited Depth to saturated zone	1 1.00	 Very limited Depth to saturated zone	 1.00
612738 Fluvaquents, occasionally flooded	 90 	•	 1.00 1.00		 1.00 1.00		 1.00 1.00
612753 Wallpack, aeolian mantle, very stony-	 85 	 Somewhat limited Slope	1 1 1 1 1 1 1 1 1 1	 Somewhat limited Slope	 0.63	 Very limited Slope	 1.00
612756 Wallpack, aeolian mantle, very stony-	 85 	 Not limited 	 	 Not limited 	 	 Not limited 	
612757 Wallpack, aeolian mantle, very stony-	 85 	_	 1.00	 Very limited Slope	 1.00	 Very limited Slope	 1.00
612767 Wellsboro, extremely stony	 85 	 Somewhat limited Slope Depth to thin cemented pan Depth to saturated zone	0.63 0.50	saturated zone Slope	1.00	Depth to	 1.00 0.39
612768 Wellsboro, extremely stony	 85 	 - Somewhat limited Depth to thin cemented pan Depth to saturated zone	 0.50 0.39	saturated zone	 1.00 	 - Somewhat limited Depth to saturated zone -	 0.39

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	 Small commerci buildings	.al
	map unit 			 Rating class and limiting features 		 Rating class and limiting features 	
613393 Alden, extremely stony	 90 	Ponding	1.00 1.00	•	 1.00 1.00	•	 1.00 1.00
613447 Unadilla	 85 	 Not limited 	 	 Not limited	 	 Not limited 	
613448 Unadilla	 85 	 Not limited 		 Not limited 	 	 Somewhat limited Slope 	 0.50
614075 Wurtsboro, extremely stony	 80 	Slope Depth to saturated zone	1.00 0.98	Depth to saturated zone	1.00 1.00		 1.00 0.98
Swartswood, extremely stony	 20 	Slope	 1.00 0.50	•	 1.00 	 Very limited Slope 	 1.00
620179 Arnot, very rocky	 55 	·	 1.00 	 Very limited Depth to hard bedrock 	 1.00 	 Very limited Depth to hard bedrock Slope	 1.00 1.00
Lordstown, very rocky	 40 		 0.06 	 Very limited Depth to hard bedrock 	 1.00 	 Very limited Slope Depth to hard bedrock	 1.00 0.06
620180 Arnot	 45 	Slope	 1.00 1.00	•	 1.00 1.00	•	 1.00 1.00
Lordstown	 40 	Slope	 1.00 0.06	•	 	•	 1.00 0.06
Rock outcrop	 15 	 Not rated 	 	 Not rated 	! 	 Not rated 	
620181 Arnot	 60 	•	 1.00 1.00	•	 1.00 1.00 	•	 1.00 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings	lal
	map unit 			Rating class and limiting features 		Rating class and limiting features 	
620181 Lordstown	 25 	Slope	 1.00 0.06	•	 1.00 1.00	•	 1.00 0.06
Rock outcrop	 15	 Not rated		 Not rated		 Not rated	i
623089 Chippewa, extremely stony		Ponding	 1.00 1.00	•	 1.00 1.00		 1.00 1.00
623109 Farmington	 50 	·	 1.00 	 Very limited Depth to hard bedrock 	 1.00 	 Very limited Depth to hard bedrock Slope	 1.00 1.00
Rock outcrop	40	 Not rated		 Not rated		 Not rated	
624811 Galway, very rocky	 80 	Slope	 1.00 0.90	-	 1.00 1.00	•	 1.00 0.90
624813 Lackawanna, extremely stony	 85 		 0.50	 Not limited 	 	 Not limited 	
624816 Lordstown, very rocky	 	Slope Depth to hard bedrock	0.63 0.06 	bedrock Slope 	1.00 0.63 	Depth to hard bedrock 	 1.00 0.06
Wallpack, very rocky	35 	Slope	 0.63 0.50 		 0.63 	Very limited Slope 	 1.00
624822	 		į	, 	į		į
Lordstown	50 	Very limited Slope Depth to hard bedrock	 1.00 0.06	-	 1.00 1.00	•	 1.00 0.06
Wallpack	' 35 	 Very limited Slope Depth to thin cemented pan	 1.00 0.50	_	 1.00 	 Very limited Slope 	 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

Map unit symbol and soil name	Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci	ial
	map unit 			Rating class and limiting features		 Rating class and limiting features 	
624823 Lordstown	 50 1	Slope	 0.63 0.06	•	 1.00 0.63	Depth to hard	 1.00 0.06
Wallpack	 35 	 Somewhat limited Slope Depth to thin cemented pan	 0.63 0.50	•	 0.63 	 Very limited Slope 	 1.00
624824 Lordstown	 50 	 Somewhat limited Depth to hard bedrock	 0.06	 Very limited Depth to hard bedrock	 1.00	 Somewhat limited Depth to hard bedrock	 0.06
Wallpack	 35 		 0.50	 Not limited 	 	 Not limited 	
624826 Manlius, very rocky-	 60 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.71 0.42	Depth to hard bedrock	 1.00 1.00 0.42	Depth to hard bedrock	 1.00 0.71 0.42
Nassau, very rocky	 25 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 0.39	Depth to hard bedrock	 1.00 1.00 0.39	Depth to hard bedrock	 1.00 1.00 0.39
624827 Nassau, very rocky	 55 	 Very limited Depth to hard bedrock Large stones	 1.00 0.15	bedrock	 1.00 0.15	bedrock	 1.00 0.15
Manlius, very rocky-	 44 	 Somewhat limited Depth to hard bedrock Large stones	 0.54 0.33	bedrock	 1.00 0.33	bedrock	 0.54 0.33
624828 Nassau, very rocky	 55 	 Very limited Depth to hard bedrock Slope Large stones	 1.00 0.63 0.15	bedrock Slope	 1.00 0.63 0.15	Depth to hard bedrock	 1.00 1.00 0.15
Manlius, very rocky-	 44 	 Somewhat limited Slope Depth to hard bedrock Large stones	 0.63 0.54 0.33	bedrock Slope	 1.00 0.63 0.33	Depth to hard bedrock	 1.00 0.54 0.33

Table 8.--Dwellings and Small Commercial Buildings--Continued

	Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings	ial
	unit		Value	Rating class and	Value	Rating class and	Value
	 	limiting features		limiting features		limiting features	
624829	 	 	 	I I	 	 	
Nassau, very rocky	55	_		Very limited		Very limited	1
		Slope	11.00	-	11.00	•	1.00
	! !	Depth to hard bedrock	11.00	Depth to hard bedrock	11.00	Depth to hard bedrock	11.00
	į	Large stones	0.15	•	0.15	•	0.15
Manlius, very rocky-	 44	 Very limited	l I	 Very limited	 	 Very limited	1
,	i	Slope	11.00	_	11.00	_	11.00
	l I	Depth to hard	0.54	•	1.00	•	10.54
	 	bedrock Large stones	I 0.33	bedrock Large stones	 0.33	bedrock Large stones	1 10.33
	i	large beones	1		1	large beomes	1
624832			!	1	!	1	!
Nassau	50 	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	1
		Depth to hard	11.00	•	11.00	•	11.00
	I	bedrock	1	bedrock	1	bedrock	1
	 	Large stones	10.39	Large stones	10.39	Large stones	10.39
Rock outcrop	 45 	 Not rated 	į	 Not rated 	į	 Not rated 	į
624841	i	· 	i	i i	i	i I	i
Oquaga	60	_		Very limited		Very limited	1
		Slope Depth to hard	1.00 0.84	-	1.00 1.00	•	1.00 0.84
	' 	bedrock	U. U. =	bedrock	1	bedrock	10.04
	İ	Large stones	0.01	Large stones	0.01	Large stones	0.01
Rock outcrop	 25	 Not rated	 	 Not rated	! !	 Not rated	
624845	 	l 		 		 	
Rock outcrop	45	Not rated	į	Not rated	į	Not rated	į
Farmington) 35	 Very limited	i	 Very limited	i	 Very limited	i
		Slope	11.00	•	11.00	•	11.00
	 	Depth to hard bedrock	1.00 	Depth to hard bedrock	1.00 	Depth to hard bedrock	1.00
Galway	l I 20	 Very limited	1	 Very limited	1	 Very limited	1
cainay	20	Slope	1.00	_	1.00	=	11.00
	 	Depth to hard bedrock	0.90 	Depth to hard bedrock	1.00 	Depth to hard bedrock	0.90
624846	 	 	l I	 	 	 	1
Rock outcrop	40	 Not rated	i	 Not rated	i	 Not rated	i
Arnot	 30	 Very limited	1	 Very limited	1	 Very limited	1
111100		Slope	1.00	_	1.00	_	11.00
	!	Depth to hard	11.00	Depth to hard	11.00	Depth to hard	11.00
	 	bedrock 	 	bedrock	 	bedrock	1
Rubble land	20	Very limited	i	 Very limited	i	 Very limited	i
		Slope	11.00	_	11.00	•	1.00
	I	Large stones	11.00	Large stones	1.00	Large stones	1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings	lal
	map unit 			Rating class and limiting features		Rating class and limiting features	
626816 Udifluvents, occasionally flooded	 90 	 Very limited Flooding 	 1.00	 	 1.00 0.87		 1.00
635458 Oquaga, very rocky	 55 	 Somewhat limited Depth to hard bedrock Slope Large stones	 0.84 0.63 0.01	bedrock Slope	 1.00 0.63 0.01	Depth to hard bedrock	 1.00 0.84 0.01
Lackawanna, very rocky	 30 	Slope	 0.63 0.50	· _	 0.63 	 Very limited Slope 	 1.00
635459 Oquaga, very rocky	 50 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.84 0.01	Depth to hard bedrock	 1.00 1.00 	Depth to hard bedrock	 1.00 0.84 0.01
Lackawanna, very rocky	 35 	Slope	 1.00 0.50	•	 1.00 	 Very limited Slope 	 1.00
740953 Delaware, rarely flooded	 80 	 Very limited Flooding	 1.00	 Very limited Flooding	 1.00	 Very limited Flooding	 1.00
740968 Nassau, very rocky	55 	 Very limited Depth to hard bedrock Slope Large stones	 1.00 0.63 0.15	bedrock Slope	 1.00 0.63 0.15	Depth to hard bedrock	 1.00 1.00 0.15
Manlius, very rocky-	 44 	 Somewhat limited Slope Depth to hard bedrock Large stones 	 0.63 0.54 0.33	bedrock Slope	 1.00 0.63 0.33	Depth to hard bedrock	 1.00 0.54 0.33
740969 Nassau, very rocky	 55 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 1.00 1.00 0.15	Depth to hard bedrock	 1.00 1.00 0.15	Depth to hard bedrock	 1.00 1.00 0.15

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	 Pct. of map	basements	ut	 Dwellings with bas 	ements	Small commerci buildings	lal
	map unit 			Rating class and limiting features		Rating class and limiting features 	
740969 Manlius, very rocky-	 44 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.54 0.33	Depth to hard bedrock	 1.00 1.00 0.33	Depth to hard bedrock	 1.00 0.54 0.33
740971 Oquaga, very rocky	 55 	 Somewhat limited Depth to hard bedrock Slope Large stones	0.84	bedrock Slope	11.00	Depth to hard bedrock	 1.00 0.84 0.01
Lackawanna, very rocky	 30 	 Somewhat limited Slope Depth to thin cemented pan	 0.63 0.50	•	 0.63 	 Very limited Slope 	 1.00
740972 Oquaga, very rocky	 50 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.84 0.01	Depth to hard bedrock	 1.00 1.00 0.01	Depth to hard bedrock	 1.00 0.84 0.01
Lackawanna, very rocky	 35 	 Very limited Slope Depth to thin cemented pan	 1.00 0.50	•	 1.00 	 Very limited Slope 	 1.00
740974 Oquaga	 60 	 Very limited Slope Depth to hard bedrock Large stones	 1.00 0.84 0.01	Depth to hard bedrock	 1.00 1.00 0.01	Depth to hard bedrock	 1.00 0.84 0.01
Rock outcrop740975	 25 	 Not rated 	 	 Not rated 	 	 Not rated 	
Rock outcrop Arnot	ĺ	l	 1.00	 Not rated Very limited Slope	 1.00	 Not rated Very limited Slope	 1.00
Rubble land	 20 	Depth to hard bedrock 	1.00 	Depth to hard bedrock Very limited Slope	1.00 	Depth to hard bedrock Very limited Slope	1.00 1.00 1.00 1.00
740987 Scio	 80 	 Somewhat limited Depth to saturated zone 	 0.77 	 Very limited Depth to saturated zone 	•	 Somewhat limited Depth to saturated zone 	 0.77

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. Pct. of map	basements	ut	Dwellings with bas 	ements	Small commerci buildings	lal
	map unit 	· ———————		Rating class and limiting features		Rating class and limiting features	
740988 Udifluvents, occasionally flooded		=	 1.00	•		 	 1.00
740991 Unadilla	 85	 Not limited	 	 Not limited	 	 Not limited	
740992 Unadilla	 85 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	10.50
740995 Wellsboro, extremely stony	 85 	Depth to thin cemented pan	0.50 0.39	saturated zone	11.00	 Somewhat limited Depth to saturated zone 	 0.39
740996 Wellsboro, extremely stony	 85 	Slope Depth to thin cemented pan	0.63 0.50 0.39	saturated zone Slope	11.00	Depth to	 1.00 0.39
741149 Lackawanna, extremely stony	 85 	Slope	 0.63 0.50	-	 0.63	 Very limited Slope 	 1.00
741150 Lackawanna, extremely stony	' 85 	Slope	 1.00 0.50	-	 1.00 	 - Very limited Slope - 	 1.00
801114 Oquaga	75 	Depth to hard bedrock	 0.84 0.01	bedrock	 1.00 0.01	Depth to hard	 1.00 0.84 0.01
Rock outcrop	 15 	 Not rated 	! 	 Not rated 	! 	 Not rated 	
810906 Oquaga	75 	Depth to hard bedrock	 0.84 0.01	bedrock	 1.00 0.01	Depth to hard	 1.00 0.84 0.01

Table 8.--Dwellings and Small Commercial Buildings--Continued

	 Pct. of map	basements	ut	 Dwellings with bas 	ements	 Small commerci buildings	.al
	-			Rating class and limiting features		Rating class and limiting features	
810906 Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	
1147465 Alden, extremely stony	 90 	Ponding	1.00 1.00		1.00 1.00	 - Very limited Ponding Depth to saturated zone	 1.00 1.00
1147467 Arnot, very rocky	 55 	· · · · · · · · · · · · · · · · · · ·	 1.00 	 Very limited Depth to hard bedrock 		 Very limited Depth to hard bedrock Slope	 1.00 1.00
Lordstown, very rocky	 40 			 Very limited Depth to hard bedrock 	 1.00 	 Very limited Slope Depth to hard bedrock	 1.00 0.06
1147468 Arnot	 45 	Slope Depth to hard	 1.00 1.00	Slope	 1.00 1.00	•	 1.00 1.00
Lordstown	 40 	Slope	11.00	Slope	11.00	 Very limited Slope Depth to hard bedrock	 1.00 0.06
Rock outcrop	1 15	 Not rated 		 Not rated	 	 Not rated 	
1147469 Arnot	 60 	Slope Depth to hard	 1.00 1.00	Slope	 1.00 1.00	•	 1.00 1.00
Lordstown	 25 	Slope	 1.00 0.06	· -	 1.00 1.00	· -	 1.00 0.06
Rock outcrop	1 15	 Not rated 	! !	 Not rated		 Not rated	
1147470 Atherton, very poorly drained	 60 	Ponding	 1.00 1.00	•	 1.00 1.00	•	 1.00 1.00
Atherton, poorly drained	 30 	· · · · · · · · · · · · · · · · · · ·	 1.00 	 - Very limited Depth to saturated zone 	11.00	 - Very limited Depth to saturated zone 	 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. of map	basements	ut	Dwellings with bas	ements	Small commerci buildings	.al
	unit unit 			Rating class and limiting features 		Rating class and limiting features	
1147471 Catden	 85 1 	Ponding Depth to saturated zone Organic matter	1.00 1.00	Ponding Depth to saturated zone Organic matter	1.00 1.00	Depth to	 1.00 1.00 1.00
1147474 Chippewa, extremely stony		Ponding	1.00 1.00	Ponding	1.00 1.00	•	 1.00 1.00
1147475 Colonie	 80	 Not limited	 	 Not limited	 	 Not limited	!
1147478 Delaware, rarely flooded	•	•	 1.00	 Very limited Flooding 	 1.00	 Very limited Flooding Slope	 1.00 0.50
1147482 Fredon, very stony		·	11.00	 Very limited Depth to saturated zone	11.00	 Very limited Depth to saturated zone	 1.00
Halsey, very stony		Ponding	1.00 1.00	Ponding	1.00 1.00	 Very limited Ponding Depth to saturated zone	 1.00 1.00
1147485 Hazen, very stony	 60 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.50
Hoosic, very stony	 35 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.50
1147490 Hoosic, very stony	 60 		 0.63	 - Somewhat limited Slope	 0.63	 Very limited Slope 	 1.00
Hazen, very stony	30 		10.63	•	 0.63	Very limited Slope	11.00
1147491 Hoosic, very stony	 50 	•	 1.00	 - Very limited Slope	 1.00	 Very limited Slope 	 1.00
Otisville, very stony	 40 	 Very limited Slope	 1.00	 Very limited Slope	 1.00	 Very limited Slope	 1.00
1147492 Lackawanna, extremely stony	 85 	Depth to thin	 0.50	 Not limited 	 	 Not limited 	

Table 8.--Dwellings and Small Commercial Buildings--Continued

and soil name	Pct. Of map	basements	ut	 Dwellings with bas 	ements	Small commerci buildings	al
	unit unit 	· 		Rating class and limiting features		Rating class and limiting features	
1147500 Wurtsboro, extremely stony	 90 	Depth to	 0.98 0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.98
1147501 Wurtsboro, extremely stony	 60 	 Somewhat limited Depth to saturated zone Depth to thin cemented pan	 0.98 0.50	saturated zone	 1.00 	 Somewhat limited Depth to saturated zone 	 0.98
Swartswood, extremely stony	 40 	 Somewhat limited Depth to thin cemented pan	 0.50	 - Not limited - 	 	 Not limited 	
1147502 Wurtsboro, extremely stony	 60 	Depth to saturated zone Slope	0.98	saturated zone Slope	11.00	Depth to	 1.00 0.98
Swartswood, extremely stony	 40 1	 Somewhat limited Slope Depth to thin cemented pan	 0.63 0.50	-	 0.63 	 Very limited Slope 	 1.00
1147527 Udorthents	 60	 Not limited	 	 Not limited	 	 Not limited	
Urban land	40	 Not rated		Not rated	į	 Not rated	
1147532 Udorthents	1 100	 Not limited	 	 Not limited		 Not limited	
1147533 Wurtsboro, extremely stony	 80 	 - Very limited Slope Depth to saturated zone Depth to thin cemented pan	 1.00 0.98 0.50	Depth to saturated zone	 1.00 1.00 	•	 1.00 0.98
Swartswood, extremely stony	 20 	 Very limited Slope Depth to thin cemented pan	 1.00 0.50	•	 1.00 	 Very limited Slope 	 1.00

Table 8.--Dwellings and Small Commercial Buildings--Continued

Map unit symbol and soil name	Pct. of map	basements	ut	Dwellings with bas		Small commerci buildings	al
	lunit			Rating class and limiting features 		•	
1948749		I		I	 	I	
Arnot	90 			Very limited Depth to hard bedrock 		Very limited Depth to hard bedrock Slope	 1.00 0.50
1948750	1	 	l I	 	1	 	1
Arnot		Depth to hard bedrock	1.00 	Depth to hard bedrock	1.00 	•	 1.00 1.00
1948751	1	I	I	I	I	I	1
Arnot		Slope Depth to hard	11.00	Slope Depth to hard	11.00	Very limited Slope Depth to hard bedrock 	 1.00 1.00
1948774 Conotton	 90 	 Not limited 	 	 Not limited 	 	 Somewhat limited Slope	 0.50
1948775 Conotton	•	•		•	 0.63	 Very limited Slope	 1.00
1948776 Conotton		·		·		 - Very limited Slope 	 1.00
1948777 Conotton		·		·	 1.00	 Very limited Slope	 1.00
1948797 Manlius	 90 	 Somewhat limited Depth to hard bedrock			 1.00 	 Somewhat limited Slope Depth to hard bedrock	 0.50 0.29
1948802 Manlius	 	Slope	 0.63 0.29 	Depth to hard	 1.00 0.63	Depth to hard	 1.00 0.29
1948818 Manlius	 90 	Slope	 1.00 0.29 	-	 1.00 1.00	•	 1.00 0.29
1948832 Penargyl	 90 	 Not limited 	 	 Not limited 	 	 - Somewhat limited Slope 	 0.50
1948846 Phelps	 90 		 0.77 	 - Very limited Depth to saturated zone -	 1.00 	 Somewhat limited Depth to saturated zone Slope	 0.77 0.12

Soil Survey of Delaware Water Gap National Recreation Area

Table 8.--Dwellings and Small Commercial Buildings--Continued

Map unit symbol and soil name	Pct.			Dwellings with basements		Small commercial buildings	
and soll name				!		Durrarngs	
	map	·		I		l	
	unit	Rating class and	Value	Rating class and	Value	Rating class and	Value
	1	limiting features	1	limiting features	1	limiting features	1
	_!	· I	.'	I	.	l <u></u>	.
	1	1	1	I	I	1	1
948855	1	1	1	I	1	l	1
Udorthents, loamy	- 95	Somewhat limited	1	Very limited	1	Somewhat limited	1
	1	Depth to	0.81	Depth to	1.00	Depth to	0.81
	1	saturated zone	1	saturated zone	1	saturated zone	1
	1	1	1	I	1	1	1
948989	1	I	1	I	1	I	1
Urban land	- 65	Not rated	1	Not rated	1	Not rated	1
	1	1	1	I	1	1	1
Delaware	- 25	Very limited	1	Very limited	1	Very limited	1
	1	Flooding	1.00	Flooding	1.00	Flooding	1.00
		· -				<u> </u>	

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

	 Pct. of	 Local roads and st: 	reets	 Shallow excavation	ons	 Landscaping	
	map	·		Rating class and limiting features		Rating class and limiting features 	
290836 Hoosic, very stony			11.00	Slope	1.00 1.00	•	 1.00 0.10
Otisville, very stony	 40 	-	11.00		1.00 1.00	•	 1.00 0.95
296265 Alden	 100 	Ponding Depth to saturated zone	1.00 1.00	Depth to saturated zone	1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00
296269 Fluvents, (alluvial land)		Flooding Depth to saturated zone	1.00 0.75	saturated zone Unstable excavation walls	1.00 1.00	saturated zone Droughty	 1.00 0.75 0.02
296271 Alvira	 55 	saturated zone	11.00	Depth to saturated zone	1.00 1.00		 1.00 0.26
Watson	 35 	Low strength Depth to saturated zone Shrink-swell	0.78 0.75	Depth to saturated zone Unstable excavation walls	1.00 1.00	 Somewhat limited Depth to saturated zone Large stones 	 0.75 0.16
296272 Bath	 85 	Depth to	 0.50 0.14 	saturated zone	1.00 0.10	Depth to	 0.24 0.14 0.08

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	_	=		Rating class and limiting features		_	
296273 Bath	 85 	Slope Frost action	0.63 0.50 0.14	Depth to saturated zone Slope	1.00 0.63 0.10	 Somewhat limited Slope Gravel Depth to saturated zone Large stones	 0.63 0.24 0.14
296274 Bath	 85 	Slope Frost action Depth to	1.00 0.50 0.14	Slope Depth to saturated zone	1.00 1.00 0.10	 Very limited Slope Gravel Depth to saturated zone Large stones	 1.00 0.24 0.14
296275 Bath	 90 	Frost action	0.50 0.14	Depth to saturated zone	1.00 0.10	 Somewhat limited Large stones Depth to saturated zone Gravel	 0.54 0.14 0.11
296276 Bath	90 	Slope Frost action	1.00 0.50 0.14	Depth to saturated zone Slope	1.00 1.00 0.10	Large stones Depth to	 1.00 0.54 0.14
296277 Benson	l I	Depth to hard bedrock Frost action	1.00 0.50 0.02	Depth to hard bedrock Unstable excavation walls	1.00 0.10	Droughty Large stones 	 1.00 0.88 0.68
296278 Benson		Depth to hard bedrock Slope Frost action	11.00	Depth to hard bedrock Slope Unstable excavation walls	1.00 1.00 0.10	Droughty Large stones 	 1.00 1.00 0.88 0.68
Rock outcrop	 20 	 Not rated 	 	 Not rated 	 	 Not rated 	
296279 Benson	 60 	Depth to hard bedrock Slope Frost action	1.00 1.00 0.50 0.02	bedrock Slope Unstable excavation walls	1.00 1.00 0.10	Slope Droughty Large stones 	 1.00 1.00 0.88 0.68
Rock outcrop	25 	Not rated 	 	Not rated 	 	Not rated 	

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	 Landscaping 	
	map	Rating class and		Rating class and limiting features		•	
296280 Braceville	 90 	Frost action	0.50 0.03	Depth to saturated zone	1.00 1.00	 Somewhat limited Gravel Depth to saturated zone Droughty	 0.04 0.03 0.03
296281 Braceville		Frost action	0.50 0.03	Depth to saturated zone	1.00 1.00	•	 0.04 0.03 0.03
296283 Buchanan	 90 	Frost action	0.50 0.03	Depth to saturated zone	1.00 1.00	•	 1.00 0.03
296288 Chippewa	 48 	Depth to saturated zone	1.00 1.00	Depth to saturated zone Unstable excavation walls	1.00 1.00	•	 1.00 0.43
Norwich	 48 	Depth to saturated zone	1.00 	Depth to saturated zone Dense layer	1.00 0.50 0.10	saturated zone Droughty	 1.00 0.24
296289 Chippewa	 47 	Depth to saturated zone	1.00 	Depth to saturated zone Unstable excavation walls	1.00 1.00 	saturated zone	 1.00 0.88 0.65 0.01
Norwich	 47 	Depth to saturated zone		saturated zone Dense layer	1.00 0.50 0.10	Large stones	 1.00 1.00 0.36
296295 Udorthents, cut and fill		 Not rated 	 	 Not rated 	 	 Not rated 	

 ${\tt Table 9.--Roads \ and \ Streets, \ Shallow \ Excavations, \ and \ Landscaping--Continued}$

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	_	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
296297 Dekalb	 100	 Very limited Slope	 1.00	 Very limited Depth to hard	 1.00	 Very limited Large stones	 1.00
	 	-	0.29 0.03	bedrock Slope	 1.00 0.10	Slope Droughty	1.00 0.60
296298	 	 	 	Large stones 	0.03 	 	
Dekalb	100 	Depth to hard bedrock	1.00 0.29	bedrock Slope Unstable excavation walls	1.00 1.00 0.10	Large stones Droughty Depth to bedrock	 1.00 1.00 0.60 0.29
296303	i	Ì	i	i İ	i	İ	i
Hazleton	100 	Slope Frost action	 1.00 0.50 0.07 	Unstable excavation walls Large stones	1.00 0.10	Slope 	 1.00 1.00
296304			 	 	! !	 	!
Но11у	100 	Depth to saturated zone Frost action	1.00 	saturated zone Unstable excavation walls	1.00 1.00	Depth to saturated zone 	 1.00 1.00
296311		<u>.</u>	į	<u> </u>	į	<u> </u>	į
Lackawanna	40 	Slope Frost action	 1.00 0.50 0.12 	Depth to saturated zone	1.00 1.00 0.10	Large stones Depth to	 1.00 1.00 0.12
Bath	30 30 	Slope Frost action	 1.00 0.50 0.14 	Depth to saturated zone	1.00 1.00 0.10	Large stones Depth to	 1.00 1.00 0.14 0.01
296312 Lackawanna	 80 	 Somewhat limited Frost action Depth to saturated zone	 0.50 0.12 	saturated zone	1.00 0.10	Depth to	 1.00 0.12

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	Pct. Of	Local roads and st 	reets	Shallow excavation	ons	Landscaping		
	_	=		Rating class and limiting features		_		
296313 Lackawanna	 80 	 Somewhat limited Slope Frost action Depth to saturated zone	0.63 0.50 0.12	saturated zone	1.00 0.63 0.10	Slope Depth to	 1.00 0.63 0.12	
296315 Lackawanna	 80 	 Somewhat limited Frost action Depth to saturated zone 	0.50 0.12	saturated zone	1.00 0.10	Depth to	 1.00 0.12 	
296316 Lackawanna	 80 	Slope	 1.00 0.50 0.12 	Depth to saturated zone Slope	1.00 1.00 0.10	Slope Depth to	 1.00 1.00 0.12 	
296317 Laidig	 100 	 Somewhat limited Frost action 	 0.50 	Depth to saturated zone	1.00 1.00	Droughty	 1.00 0.01 	
296326 Lordstown	 85 	 Somewhat limited Frost action Depth to hard bedrock Large stones 	0.50 0.46 	bedrock Large stones	1.00 0.10 0.10	Depth to bedrock	 1.00 0.46 	
296327 Lordstown	85 	Slope Frost action	1.00 0.50	Depth to hard bedrock Slope Large stones	1.00 1.00 0.10 0.10	Slope Depth to bedrock	 1.00 1.00 0.46	
296328 Lordstown	 40 	 Very limited Slope Frost action Depth to hard bedrock	 1.00 0.50 0.46	bedrock Slope	1.00 1.00 0.10	Large stones Depth to bedrock	 1.00 1.00 0.46 0.01	
Oquaga	 35 	 Very limited Slope Frost action Depth to hard bedrock 	 1.00 0.50 0.46 	bedrock Slope	1.00 1.00 0.10	Large stones Droughty	 1.00 1.00 0.70 0.46 0.08	

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	 Landscaping 	
	map unit 	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
296329 Mardin	 85 	Depth to saturated zone		saturated zone	1.00 0.10	saturated zone	 0.94 0.27 0.24 0.08
296330 Mardin	85 	Depth to saturated zone Slope	0.94	saturated zone	1.00 0.63 0.10	Slope	 0.94 0.63 0.27 0.24 0.08
296331 Mardin	 85 	Depth to	0.94	saturated zone	1.00 0.10	saturated zone	 0.94 0.46 0.39 0.01
296332 Mardin	 87 	Slope Depth to saturated zone	1.00 0.94 	Depth to saturated zone Slope	1.00 1.00 0.10	Depth to saturated zone	 1.00 0.94 0.46 0.39 0.01
296335 Meckesville	 100 	Slope	 0.63 0.50 	saturated zone	0.98 0.63 0.10	Gravel Large stones	 0.63 0.16 0.03
296337 Meckesville	 100 	_	 1.00 0.50 	Depth to saturated zone	1.00 0.98 0.10	Large stones 	 1.00 0.26
296338 Morris	 80 	 Very limited Depth to saturated zone Frost action 	 1.00 1.00 	saturated zone Dense layer	1.00 0.50 0.10	saturated zone Droughty	 1.00 0.34 0.29 0.03

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	Landscaping 	
	_	Rating class and limiting features 		Rating class and limiting features		Rating class and limiting features 	
296339 Morris	 75 	 Very limited Depth to saturated zone Frost action 	 1.00 1.00	saturated zone Unstable excavation walls	1.00 1.00	saturated zone Large stones	 1.00 1.00
296340	i	İ	i	İ	i	i	i
Morris	80 	Very limited Depth to saturated zone Frost action Slope 	 1.00 1.00 0.16 	saturated zone Unstable excavation walls Dense layer	1.00 1.00	saturated zone Large stones Slope 	 1.00 1.00 0.16
296341	i	i İ	i	i İ	i	i	i
Freetown, mucky peat	100 	Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00 	•	
296342	 	! 		! 	 	! 	
Paupack, mucky peat (shallow)		 Very limited Ponding Depth to saturated zone Subsidence Frost action	 1.00 1.00 1.00 1.00	Depth to saturated zone Unstable	1.00 1.00 0.10	•	 1.00 1.00
296343	 	 	 	 	 	 	
Oquaga	50 		 0.50 0.46 	bedrock	1.00 0.10	Gravel	 0.70 0.62 0.46 0.20
Lackawanna	 35 	Frost action	 0.50 0.12 	saturated zone	1.00 0.10	Depth to	 0.62 0.12 0.03
296344	 	! 	 	 	 	! 	
Oquaga	55 	Somewhat limited Slope Frost action Depth to hard bedrock	 0.63 0.50 0.46 	bedrock Slope	1.00 0.63 0.10	Slope Gravel	 0.70 0.63 0.62 0.46 0.20
Lackawanna	30 	 Somewhat limited Slope Frost action Depth to saturated zone	 0.63 0.50 0.12	saturated zone Slope	 1.00 0.63 0.10	Gravel Depth to	 0.63 0.62 0.12
	 	 	 	excavation walls 	 	Large stones 	0.03

 ${\tt Table 9.--Roads \ and \ Streets, \ Shallow \ Excavations, \ and \ Landscaping--Continued}$

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	 Landscaping 	
	_	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
296346 Oquaga	 50 	•	 0.50 0.46 	bedrock	1.00 0.10	Droughty	 1.00 0.70 0.46 0.08
Lackawanna	 35 	Frost action	 0.50 0.12 	saturated zone	1.00 0.10	Depth to	 1.00 0.12
296347	i	! 		 	! 	 	i
Oquaga	60 	Slope Frost action	 1.00 0.50 0.46 	bedrock Slope	1.00 1.00 1.00	Slope Droughty	 1.00 1.00 0.70 0.46 0.08
Lackawanna	 30 	Slope Frost action	 1.00 0.50 0.12 	saturated zone	1.00 1.00 0.10	Slope Depth to	 1.00 1.00 0.12
296348 Philo	 85 	Frost action	 1.00 1.00 0.50 0.03	saturated zone Unstable excavation walls	1.00 1.00	Depth to saturated zone 	 1.00 0.03
296349 Pope	 90 	•	 1.00 0.50 	excavation walls	11.00	i I	 0.60
296350 Pope	 90 	•	 0.50 0.40 	excavation walls	11.00	 Not limited 	
296351 Rexford, somewhat poorly drained	 40 	Depth to saturated zone	 1.00 1.00	saturated zone	1.00 0.10	saturated zone	 1.00 0.34

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st: 	reets	 Shallow excavation	ons	 Landscaping 	
	map	`		Rating class and limiting features		Rating class and limiting features	
296351 Rexford, poorly drained		Depth to saturated zone	11.00	saturated zone	1.00 0.10	 - Very limited Depth to saturated zone Droughty 	 1.00 0.34
296355 Sheffield	100 	Ponding Depth to saturated zone Frost action	1.00 1.00 	Ponding Depth to saturated zone Unstable	1.00 1.00 0.10	Depth to saturated zone	 1.00 1.00
296363 Dystrochrepts, very stony		Slope	 1.00 0.50 	bedrock Slope	1.00 1.00 1.00	Large stones Gravel	 1.00 0.32 0.07
296369 Wayland	 100 	Ponding Depth to saturated zone Frost action Flooding	1.00 1.00 1.00	Ponding Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Flooding Depth to saturated zone	 1.00 1.00 1.00
296376 Wellsboro	 80 	Frost action	 1.00 0.94 	saturated zone	1.00 0.10	Depth to	 1.00 0.94
296379 Wellsboro	 85 	Frost action Slope	 1.00 1.00 0.94	Depth to saturated zone Slope	1.00 1.00 0.10	Slope Depth to	 1.00 1.00 0.94
296385 Wyoming	 85 	 	 	 Very limited Unstable excavation walls 	1.00	 - Somewhat limited Droughty Gravel Large stones 	 0.81 0.76 0.03
296386 Wyoming	 85 	 Not limited 	 	 Very limited Unstable excavation walls 	1.00	 Somewhat limited Droughty Gravel Large stones 	 0.81 0.76 0.03

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	Shallow excavation	ons	 Landscaping 	
	map unit 	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
296387 Wyoming	 85 	 Somewhat limited Slope 	 0.63 	excavation walls	11.00	Gravel	 0.81 0.76 0.63 0.03
296388 Wyoming	 85 	•	 1.00 	•	1.00 1.00	•	 1.00 0.81 0.76 0.03
296389 Wyoming	100 	•	 1.00 	_	1.00 1.00	_	 1.00 0.78 0.76 0.03
296390 Water	 100	 Not rated 	 	 Not rated	: !	 Not rated 	
297185 Edgemere	 42 		 1.00 1.00 1.00 1.00	Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Depth to saturated zone Large stones	 1.00 1.00 1.00 1.00
Shohola	 42 	•	 1.00 1.00 0.04 	saturated zone Dense layer Unstable excavation walls	1.00 0.50 0.10	saturated zone Large stones Droughty Slope	 1.00 1.00 0.08 0.04
297186 Edgemere	 75 	Ponding	 1.00 1.00 1.00	Ponding Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Depth to saturated zone Large stones 	 1.00 1.00 1.00
297188 Manlius	 40 		 1.00 1.00 0.50 0.46 	bedrock Slope Dense layer Unstable excavation walls	1.00 1.00 0.50 0.10	Gravel Droughty Large stones	 1.00 0.90 0.69 0.61 0.46

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	Pct. Of	 Local roads and st 	reets	Shallow excavation	ons	Landscaping	
	map	Rating class and		Rating class and limiting features		=	
297188 Arnot	 35 	Depth to hard bedrock Slope Frost action	1.00 1.00	bedrock Slope Large stones Unstable	1.00 1.00 0.10 0.10	Slope Large stones Droughty	 1.00 1.00 1.00 1.00
Rock outcrop	1 15	 Not rated 	! 	 Not rated 	 	 Not rated 	
297189 Manlius	 40 	Slope Frost action	 1.00 1.00 0.50 0.46 	Depth to hard bedrock Slope Dense layer	1.00 1.00 0.50 0.10	Gravel Droughty	 1.00 0.90 0.69 0.61 0.46
Arnot	35 	Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Depth to hard bedrock Slope Large stones	1.00 1.00 0.10 0.10	Slope Large stones Droughty	 1.00 1.00 1.00 1.00
Rock outcrop	1 15	 Not rated	! !	 Not rated	! !	 Not rated	!
297190 Braceville	 82 	Frost action	0.50 0.48	saturated zone	1.00 1.00	 Somewhat limited Depth to saturated zone 	 0.48
297191 Wyalusing		Depth to saturated zone	1.00 	Depth to saturated zone Unstable excavation walls	1.00 1.00	Depth to	 1.00 1.00
297192 Pope	 95 	•	 1.00 0.50	Flooding	0.80	·	 1.00
297193 Paupack	 90 	Ponding Depth to saturated zone Subsidence		Depth to saturated zone Unstable	1.00 1.00 0.10	Depth to saturated zone	 1.00 1.00

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	map	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
297196	 	 	 	 	 	 	
Freetown	94 	Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00 	Not rated 	
297197	I I	 	İ		i I	 	
Manlius	 90 	Somewhat limited Frost action Depth to hard bedrock	0.50 0.46	bedrock Dense layer	1.00 0.50 0.10	Droughty Depth to bedrock	 0.54 0.51 0.46 0.19
297198	! 	 	i	! 	! 	! 	<u> </u>
Manlius	86 	Somewhat limited Slope Frost action Depth to hard bedrock	 0.63 0.50 0.46 	bedrock Slope Dense layer	1.00 0.63 0.50 0.10	Large stones Droughty Depth to bedrock	 0.63 0.54 0.51 0.46 0.19
297201] 		! 	 	! 	
Oquaga	75 	Very limited Slope Frost action Depth to hard bedrock Large stones	1.00 0.50 0.29	bedrock Slope Unstable excavation walls	1.00 1.00 0.10	Droughty Large stones Gravel Depth to bedrock	 1.00 0.77 0.54 0.45 0.29
297203	! 	l 		! 		! 	
Delaware	93 	Somewhat limited Frost action Flooding	•		0.10	Not limited - 	
297204 Delaware	 82 	 Somewhat limited Frost action Flooding	 0.50 0.40		0.10	 Not limited 	
297205	 	 		 	 	 	
Delaware	80 	Somewhat limited Slope Frost action Flooding	 0.96 0.50 0.40	Unstable	0.96 0.10	•	 0.96
297209	<u> </u>	 	İ	 	İ	İ	i
Philo	85 	Very limited Flooding Frost action Depth to saturated zone	 1.00 0.50 0.03	saturated zone Unstable excavation walls	1.00 1.00	Depth to saturated zone 	 1.00 0.03

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	 Landscaping 	
	map			Rating class and limiting features		•	
297210 Barbour		Flooding	 1.00 1.50 	Unstable excavation walls Flooding Depth to	11.00	i I	 0.60
297216 Wurtsboro	:	•	0.68	 Very limited Depth to saturated zone	11.00	•	 0.68
	 	•	 0.50 	•	11.00		0.61
297217 Wurtsboro	 88 	Depth to	 0.68	Depth to	11.00	•	 0.68
	 	Slope	 0.63 0.50	Unstable excavation walls	11.00	Slope Large stones	0.63 0.61
297227 Arnot	I 88	 Very limited	 	 Very limited	 	 Very limited	
	 	Depth to hard bedrock	1.00 	Depth to hard bedrock Unstable excavation walls	1.00 0.10	Depth to bedrock Droughty Gravel Large stones	1.00 1.00 1.00 0.54 0.04
297228 Arnot	 85 	Depth to hard bedrock Slope	11.00	Depth to hard bedrock Slope	1.00 1.00 0.10	Slope Droughty	 1.00 1.00 1.00 1.00
297229 Wyoming	 90 		•	Unstable excavation walls	11.00	 Very limited Large stones Droughty Gravel	 1.00 0.57 0.06
297230 Wyoming	 90 1 	 Somewhat limited Slope 	 0.63 	excavation walls	11.00	Slope	 1.00 0.63 0.57 0.06
297231 Wyoming	 90 	 Very limited Slope Large stones 	 1.00 0.53	Unstable excavation walls	1.00 1.00	Large stones Droughty	 1.00 1.00 0.57 0.06

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	Pct.	Local roads and st 	reets	Shallow excavation	ons	 Landscaping 	
	-	-		Rating class and limiting features		•	
297236 Suncook	 91 91 	·		Unstable excavation walls	11.00	Flooding	 0.69 0.60
297237 Mardin	 85 	Depth to saturated zone	0.94	Depth to saturated zone	1.00 0.10	 Somewhat limited Depth to saturated zone Droughty Large stones Gravel	 0.94 0.33 0.20 0.09
297238 Mardin	 85 	Depth to saturated zone Slope	0.94 0.63	Depth to saturated zone Slope	1.00 0.63 0.10	•	 0.94 10.63 0.33 0.20 0.09
297239 Mardin	•	Depth to saturated zone	0.94 	Depth to saturated zone	1.00 0.10	 Somewhat limited Depth to saturated zone Large stones Droughty Gravel	 0.94 0.84 0.33
297240 Mardin	 85 	Depth to saturated zone Slope	0.94	Depth to saturated zone Slope	1.00 0.63 0.10	Large stones	 0.94 0.84 0.63 0.33
297241 Unadilla	 90 	 Very limited Frost action 	 1.00 	 Somewhat limited Unstable excavation walls 	0.10	 Not limited 	
297242 Shohola	 62 	Depth to saturated zone	1.00 	saturated zone Unstable excavation walls	1.00 1.00	Droughty	 1.00 1.00 0.08
Edgemere	29 29 	Ponding Depth to saturated zone	1.00 1.00	Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Depth to saturated zone Large stones	 1.00 1.00 1.00

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	Pct. of	 Local roads and st 	reets	Shallow excavation	ons	 Landscaping 	
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
297243 Shohola	 62 	 Very limited Depth to saturated zone Frost action Slope 	 1.00 1.00 0.63	saturated zone Unstable excavation walls Slope	1.00 1.00	saturated zone Large stones Slope Droughty	 1.00 1.00 0.63 0.08
Edgemere	 29 	 Very limited Ponding Depth to saturated zone Frost action Slope	 1.00 1.00 1.00 0.63	Depth to saturated zone Unstable excavation walls Slope	1.00 1.00 1.00	Depth to saturated zone Large stones Slope	 1.00 1.00 1.00 0.63
297244 Lordstown	 40 	 Somewhat limited Frost action Depth to hard bedrock 	 0.50 0.46 	bedrock	1.00 1.00	Depth to bedrock	 1.00 0.46 0.01
Swartswood	 35 	 Somewhat limited Frost action 	 0.50 	saturated zone	1.00 1.00	Droughty	 0.84 0.02
297247 Chenango	 86 	 Somewhat limited Frost action 	 0.50	 Very limited Unstable excavation walls	11.00	 Somewhat limited Gravel Droughty	 0.12 0.07
297248 Chenango	85 	 Somewhat limited Slope Frost action 	 0.63 0.50	excavation walls	11.00	Gravel	 0.63 0.12 0.07
297249 Chenango	 90 	 Very limited Slope Frost action 	 1.00 0.50	•	1.00 1.00	•	 1.00 0.12 0.07
297253 Craigsville	50 51 1	 Very limited Flooding Large stones Frost action	 1.00 0.99 0.50	excavation walls Large stones	11.00	Flooding Droughty	 0.99 0.60 0.01
Wyoming	 40 	 Not limited 	 	 Very limited Unstable excavation walls 	11.00	 Very limited Large stones Droughty Gravel 	 1.00 0.57 0.06

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	Shallow excavation	ons	 Landscaping 	
	map	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	•
297254 Pits, shale	 40	 Not rated	 	 Not rated	 	 Not rated	
Pits, gravel	 40	 Not rated	 	 Not rated	l I	 Not rated	l I
298049 Wurtsboro,	 	 	 	 	 	 	
extremely stony	90 	Depth to saturated zone	0.75	saturated zone Unstable excavation walls	1.00 1.00	saturated zone	 0.75
298050 Wurtsboro,	 	 	!	 -	 	 -	į
extremely stony		Depth to saturated zone	0.75 	saturated zone Unstable excavation walls	1.00 1.00	saturated zone	 0.75
Swartswood, extremely stony	 40	 Somewhat limited	i I	 Very limited	I	 Not limited	į
	 		0.50 	Unstable excavation walls	11.00	 	i ! !
298051 Wurtsboro,	 	 	! !	 	! !	! 	-
extremely stony	 60 	Depth to saturated zone Slope	0.75 	saturated zone Unstable excavation walls Slope	1.00 1.00	saturated zone Slope 	 0.75 0.63
Swartswood,	 40	 Comormot limited		 Very limited		 Somewhat limited	į
extremely stony		Slope	•	Unstable excavation walls Slope	11.00	Slope 	 0.63
298075 Colonie	 80 	 Not limited 	 	 Very limited Unstable excavation walls	11.00	 Somewhat limited Droughty 	 0.47
298188	! 		!	! !	! !	! !	-
Lackawanna, extremely stony	 85 	Slope	 1.00 0.50 	Dense layer	1.00 0.50 0.10	Large stones	 1.00 0.88

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

= =	Pct. Of	 Local roads and st: 	reets	 Shallow excavation	ons	 Landscaping 	
	map	'		Rating class and limiting features		Rating class and limiting features	
298189 Lackawanna, extremely stony	 85 	Slope	 0.63 0.50	Dense layer	0.63 0.50 0.10	Slope	 0.88 0.63
298221 Swartswood, extremely stony	 90 		 0.50 	excavation walls	11.00	İ	
298222 Swartswood, extremely stony	 90 	Slope	 0.63 0.50 	excavation walls Slope	11.00	i I	 0.63
298223 Swartswood, extremely stony	 85 	Slope	 1.00 0.50 	Slope Unstable excavation walls	1.00 1.00	i I	 1.00
298255 Delaware, rarely flooded	 80 	Frost action	 0.50 0.40	Unstable	0.10	 Not limited 	
298256 Delaware, rarely flooded	 80 	Frost action	 0.50 0.40	•	0.10	 Not limited 	
298257 Wallpack	85 	Slope	 0.63 0.50 	excavation walls Slope	11.00	 	 0.63
298258 Wallpack	 85 	Slope	 1.00 0.50 	Unstable excavation walls Dense layer	1.00 1.00	 	 1.00

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	map	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
298259 Wallpack, extremely stony				excavation walls	11.00	İ	
298260 Wallpack, extremely stony		Slope	 0.63 0.50	excavation walls	11.00	 	 0.63
298261 Wallpack	•	•		Unstable excavation walls	11.00	İ	
298262 Wallpack, extremely stony		Slope	 1.00 0.50	Slope Unstable excavation walls	1.00 1.00	 	 1.00
298265 Venango, extremely stony	 	Depth to saturated zone Frost action	1.00 	Depth to Saturated zone Unstable excavation walls	1.00 1.00	İ	 1.00
298266 Venango, extremely stony		Depth to saturated zone Frost action Low strength		Depth to saturated zone Unstable excavation walls Slope	1.00 1.00	 	 1.00 0.63
298409 Swartswood, extremely stony	 90 		 0.50 	excavation walls	11.00	İ	
298411 Swartswood, extremely stony	 	Slope	 0.63 0.50 	excavation walls Slope Dense layer	11.00	 	 0.63

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	Landscaping 	
	_	Rating class and limiting features		Rating class and limiting features		_	
298413 Swartswood, extremely stony	 85 	Slope	 1.00 0.50	Slope Unstable excavation walls	1.00 1.00	 	 1.00
318498 Hazen, very stony		 Somewhat limited Frost action 		• •	11.00	 Somewhat limited Droughty 	 0.01
Hoosic, very stony	 35 	 Not limited 	 		11.00	 Somewhat limited Droughty 	 0.10
318533 Hazen, very stony				• •	11.00	 Somewhat limited Droughty 	 0.01
Hoosic, very stony	 40 	 Not limited 	•	• •	11.00	 Somewhat limited Droughty 	 0.10
319783 Catden	 	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00	 	
319784 Fredon, very stony	 50 	Frost action	1.00 0.96	Depth to saturated zone	1.00 1.00	 - Somewhat limited Depth to saturated zone 	 0.96
Halsey, very stony	 40 	 Very limited Ponding Depth to saturated zone Frost action	 1.00 1.00 1.00	Ponding Depth to saturated zone	1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00
543222 Andover, extremely stony	 55 	 - Very limited Depth to saturated zone Frost action 	 1.00 1.00	saturated zone	1.00 1.00	saturated zone	 1.00 0.54 0.01
Buchanan, extremely stony		 Somewhat limited Frost action Depth to saturated zone	 0.50 0.48 	saturated zone	1.00 1.00	Depth to	 1.00 0.48 0.01

 ${\tt Table 9.--Roads \ and \ Streets, \ Shallow \ Excavations, \ and \ Landscaping--Continued}$

	 Pct. of	•	reets	 Shallow excavatio 	ons	 Landscaping 	
	_	=		Rating class and limiting features		_	
543243 Berks	 65 	•	1.00 0.20	Depth to hard bedrock Slope	1.00 1.00 0.10	Gravel	 1.00 0.79 0.46 0.20 0.20
Weikert	 25 	Depth to hard bedrock Slope	1.00 1.00	Depth to hard bedrock Slope	1.00 1.00 0.10	Slope Droughty	 1.00 1.00 1.00 0.92
543246 Buchanan	' 75	' Somewhat limited	 	' Very limited	' 	 Somewhat limited	i i
	 	Frost action	0.50 0.48	Depth to saturated zone	1.00 1.00	Gravel Depth to	0.54 0.48
543247 Buchanan, extremely	 	 	 	 	 	 	
		 Somewhat limited Frost action Depth to saturated zone 	0.50 0.48	Depth to saturated zone	1.00 1.00	Somewhat limited Gravel Depth to saturated zone	 0.54 0.48
543257 Chippewa	l I	Depth to saturated zone	1.00 1.00	Depth to saturated zone Dense layer	1.00 0.50 0.10		 1.00 0.30
543258 Chippewa	90 	Depth to saturated zone	1.00 	Depth to saturated zone Dense layer	1.00 0.50 0.10		 1.00 0.30
543259 Chippewa, extremely stony		Depth to saturated zone		saturated zone Dense layer	1.00 0.50 0.10	•	 1.00 0.92 0.65
543271 Delaware	 90 	 - Somewhat limited Frost action Flooding 	0.50 0.40		11.00	 Not limited 	

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	_	=		Rating class and limiting features		_	
543276 Fluvaquents		Depth to saturated zone Frost action	1.00 1.00	Depth to Saturated zone Flooding Unstable excavation walls	1.00 0.80 0.10	saturated zone	 1.00 1.00
543292 Hazleton, extremely stony		Slope Frost action	 1.00 0.50 0.10 	Slope Large stones Unstable excavation walls	1.00 0.10 0.10	Slope Gravel 	 1.00 1.00 0.01
543293 Hazleton, extremely stony		Slope Frost action	 1.00 0.50 0.10	Slope Large stones	1.00 0.10 0.10	Large stones	 1.00 1.00 0.01
543299 Laidig, extremely stony	 90 		 0.50 	Unstable excavation walls	1.00	İ	 1.00 0.16
543300 Laidig, extremely stony	 90 	Slope		Unstable excavation walls Slope	1.00	Slope Gravel	 1.00 1.00 0.16
543304 Laidig	50 	•	 1.00 0.50 	Unstable excavation walls Depth to	1.00 1.00	Large stones Gravel	 1.00 1.00 0.16
Rubble land	 40 	·	 1.00 1.00 	Slope	 1.00 1.00 0.50	ĺ	
543318 Rubble land	75 	•	 1.00 1.00	Slope Dense layer	 1.00 1.00 0.50	Slope	 1.00 1.00 1.00

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	Shallow excavati	ons	 Landscaping	
and soil name	map	 Rating class and limiting features 		Rating class and limiting features 		 Rating class and limiting features 	Value
543327 Swartswood	 90 1 	 Somewhat limited Frost action 	 0.50 	excavation walls	11.00	Large stones	 0.24 0.08 0.01
543328 Swartswood	 90 	 Somewhat limited Slope Frost action 	 0.63 0.50 	excavation walls Depth to saturated zone	11.00	Gravel	 10.63 0.24 0.08 0.01
543330 Swartswood, extremely stony	 50 	 Somewhat limited Frost action 	 0.50 	excavation walls	11.00	Gravel	 0.54 0.01 0.01
Wurtsboro, extremely stony	 30 	 Somewhat limited Frost action Depth to saturated zone	 0.50 0.19 	saturated zone	1.00 1.00	 Somewhat limited Large stones Depth to saturated zone	 0.92 0.19
543331 Swartswood, extremely stony	 	 	 1.00 0.50 	excavation walls	11.00	Large stones Gravel	 1.00 0.54 0.01 0.01
Wurtsboro, extremely stony	 30 	Slope	 1.00 0.50 0.19	saturated zone Unstable excavation walls	1.00 1.00	Large stones Depth to saturated zone	 1.00 0.92 0.19
543359 Volusia	 85 	 Very limited Depth to saturated zone Frost action 	11.00	saturated zone Dense layer	1.00 0.50 0.10		 1.00 0.92 0.01

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
		Rating class and limiting features		Rating class and limiting features 		•	
543360 Volusia, extremely	 	 	 	 	 	 	
stony	85 	Depth to saturated zone	11.00	saturated zone Dense layer	1.00 0.50 0.10	Large stones	 1.00 1.00 0.85
543374		 	i	! 	! 	! 	
Wurtsboro	90 	Frost action	0.50 0.19	saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone Gravel 	 0.19 0.04
543375	i .		į	<u>.</u>	İ	i	į
Wurtsboro	90 	Slope	10.63	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to	 0.63 0.19
	 	Depth to saturated zone 	• • • •	excavation walls	1.00 0.63	Gravel	 0.04
612280] 	1
Scio	80 	Frost action	1.00 0.43	Depth to saturated zone	1.00 0.10	saturated zone	 0.43
612666 Colonie	 80 	 Not limited 	 	•	1.00	 Somewhat limited Droughty 	 0.47
612668 Hoosic, very stony	 60 		 0.63	Unstable excavation walls	1.00 	İ	 0.63
	 	 	 	Slope 	0.63 	Droughty 	0.10
Hazen, very stony	30 	Somewhat limited Slope Frost action 	 0.63 0.50	excavation walls	1.00	Droughty	 0.63 0.01
612724	 	 	 	 	 	 	
Lordstown, very rocky	l I 50	 Very limited	 	 Very limited	 	 Very limited	1
-	 	Slope Frost action Depth to hard bedrock	1.00 0.50 0.06	Depth to hard bedrock Slope	1.00 1.00 1.00	Slope Depth to bedrock	1.00 0.06
Wallpack, very rocky	 40 	Very limited Slope Frost action 	 1.00 0.50 	Unstable excavation walls	1.00 1.00	 	 1.00

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st: 	reets	 Shallow excavation	ons	 Landscaping 	
	map	 Rating class and limiting features 		Rating class and limiting features 		 Rating class and limiting features 	
612732 Atherton, very poorly drained	 60 	Ponding Depth to saturated zone Frost action	 1.00 1.00 1.00	Depth to saturated zone Unstable	1.00 1.00 0.10	,	 1.00 1.00
Atherton, poorly drained	 30 1 	Depth to saturated zone Frost action	 1.00 1.00 1.00	saturated zone Unstable	1.00 0.10	 Very limited Depth to saturated zone 	 1.00
612738 Fluvaquents, occasionally flooded	 90 	Depth to saturated zone Frost action	 1.00 1.00 1.00	saturated zone Flooding	1.00 0.60 0.10	saturated zone Flooding	 1.00 0.60
612753 Wallpack, aeolian mantle, very stony-	 85 	Slope	 0.63 0.50	excavation walls	11.00	 Somewhat limited Slope 	 0.63
612756 Wallpack, aeolian mantle, very stony-	 85 		 0.50 	 - Very limited Unstable excavation walls 	11.00	 Not limited 	
612757 Wallpack, aeolian mantle, very stony-	 85 	Slope	 1.00 0.50	· · · · · · · · · · · · · · · · · · ·	1.00 1.00	=	 1.00
612767 Wellsboro, extremely stony	 85 	Slope Frost action	 0.63 0.50 0.19 	saturated zone Slope Dense layer	1.00 0.63 0.50 0.10	Depth to saturated zone Large stones	 0.63 0.19 0.16

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	map	'		Rating class and limiting features		Rating class and limiting features	
612768 Wellsboro, extremely stony		Frost action	 0.50 0.19 	saturated zone Dense layer	1.00 0.50 0.10	saturated zone Large stones	 0.19 0.16
613393 Alden, extremely stony	 	Ponding Depth to saturated zone Frost action	1.00 1.00 	Depth to saturated zone Unstable	1.00 1.00 0.10	Depth to saturated zone	 1.00 1.00
613447 Unadilla	 85 		 1.00	 Somewhat limited Unstable excavation walls	0.10	 Not limited 	
613448 Unadilla	 85 	·	 1.00	 Somewhat limited Unstable excavation walls	0.10	 Not limited 	
614075 Wurtsboro, extremely stony	 80 	Slope Depth to saturated zone	1.00 0.75 	Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Depth to saturated zone	 1.00 0.75
Swartswood, extremely stony	 20 	Slope	11.00	Unstable excavation walls	1.00 1.00	•	 1.00
620179 Arnot, very rocky	55 	Depth to hard bedrock	1.00 	bedrock	1.00 0.50	Droughty	 1.00 0.99
Lordstown, very rocky	 40 		 0.50 0.06 	bedrock	1.00 1.00	 Somewhat limited Depth to bedrock 	 0.06

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	 Landscaping 	
	_	=		Rating class and limiting features		_	
620180 Arnot		Depth to hard bedrock Slope	1.00 1.00	bedrock Slope	1.00 1.00 0.50	Slope Droughty	 1.00 1.00 0.99
Lordstown	 40 	Slope Frost action	1.00 0.50 0.06	Depth to hard bedrock Slope	1.00 1.00 1.00	Depth to bedrock	 1.00 0.06
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	
620181 Arnot	 60 	Depth to hard bedrock Slope		bedrock Slope	1.00 1.00 0.50	Droughty	 1.00 1.00 0.99
Lordstown	 25 	Slope Frost action	11.00	Depth to hard bedrock Slope	1.00 1.00 1.00	Depth to bedrock	 1.00 0.06
Rock outcrop	 15	 Not rated		 Not rated	 	 Not rated 	!
623089 Chippewa, extremely stony		Ponding Depth to saturated zone Frost action	1.00 1.00 1.00	Ponding Depth to saturated zone Dense layer	1.00 1.00 0.50 0.10	Depth to saturated zone Droughty	 1.00 1.00 0.49
623109 Farmington	 50	 Very limited	i I	 Very limited	 	 Very limited	i I
-	 	bedrock	11.00	Depth to hard bedrock	1.00 0.50	Depth to bedrock Droughty	1.00 0.97
Rock outcrop	 40 	 Not rated 	 	 Not rated 	 	 Not rated 	
624811 Galway, very rocky	80 	Slope Depth to hard bedrock	1.00 0.90	bedrock Slope	1.00 1.00 1.00	Depth to bedrock Droughty	 1.00 0.90 0.01

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	 Pct. of	 Local roads and st 	reets	Shallow excavation	ons	 Landscaping 	
	map	Rating class and limiting features		Rating class and limiting features		_	
624813 Lackawanna, extremely stony	 85 		 0.50	· -	0.50 0.10		 0.88
624816 Lordstown, very rocky	 50 	 - Somewhat limited Slope Frost action Depth to hard bedrock	0.63 0.50	bedrock Unstable excavation walls	1.00 1.00	Depth to bedrock 	 0.63 0.06
Wallpack, very rocky	 35 	 Somewhat limited Slope Frost action 	 0.63 0.50 	Unstable excavation walls Slope	1.00	 	 0.63
624822 Lordstown	 50 	 Very limited Slope Frost action Depth to hard bedrock	 1.00 1.00 0.50 0.06	bedrock Slope	1.00 1.00 1.00	Depth to bedrock	 1.00 0.06
Wallpack	 35 	 Very limited Slope Frost action 	 1.00 0.50 	Slope Unstable excavation walls	1.00 1.00	 	 1.00
624823 Lordstown	 50 	 Somewhat limited Slope Frost action Depth to hard bedrock	0.63 0.50 0.06	bedrock Unstable excavation walls	1.00 1.00	Depth to bedrock 	 0.63 0.06
Wallpack	 35 	 Somewhat limited Slope Frost action 		excavation walls	11.00	 	 0.63
624824 Lordstown	 50 	 Somewhat limited Frost action Depth to hard bedrock	 0.50 0.06 	bedrock	1.00 1.00	İ	 0.06
Wallpack	 35 	 Somewhat limited Frost action 	 0.50 	excavation walls Dense layer	1.00 0.50	İ	

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	Pct. of	 Local roads and st 	reets	Shallow excavati	ons	 Landscaping 	
	map unit 	Rating class and limiting features	•	Rating class and limiting features		Rating class and limiting features	
624826	 	 	 	 	 	 	
Manlius, very rocky-	60 	Very limited Slope Depth to hard bedrock	 1.00 0.71 	bedrock	 1.00 1.00	Large stones	 1.00 0.99 0.71
	 	Frost action Large stones 	0.50 0.42 	-	0.42 0.10 	• •	0.70
Nassau, very rocky	25 	Very limited Depth to hard bedrock Slope	 1.00 1.00	bedrock	 1.00 1.00	Slope	 1.00 1.00
	 	STOPE Frost action Large stones 	0.50 0.39 	Unstable excavation walls	0.50	Large stones	0.92
624827	i 	 	į		į		į
Nassau, very rocky	55 	Very limited Depth to hard bedrock Frost action Large stones	1.00 0.50 0.15	bedrock Large stones	1.00 0.15 0.10	Very limited Depth to bedrock Droughty Large stones 	 1.00 1.00 0.92
Manlius, very rocky-	 44	 Somewhat limited	1	 Very limited	 	 Somewhat limited	1
,	 	Depth to hard bedrock Frost action Large stones	0.54 0.50 0.33	Depth to hard bedrock Large stones	1.00 0.33	Droughty Depth to bedrock	10.99 10.56 10.54 10.02
	į	 		excavation walls	•		
624828	 	 	 	! 	 	! 	
Nassau, very rocky	55 	Very limited Depth to hard bedrock Slope Frost action Large stones	 1.00 0.63 0.50 0.15	bedrock Slope Large stones	1.00 0.63 0.15 0.10	Droughty Large stones	 1.00 1.00 0.92 0.63
Manlius, very rocky-	 44 	 Somewhat limited Slope Depth to hard bedrock Frost action Large stones	 0.63 0.54 0.50 0.33	bedrock Slope Large stones	1.00 0.63 0.33 0.10	Slope Droughty Depth to bedrock	 0.99 0.63 0.56 0.54 0.02
624829	İ	 	İ	1	i I	 -	
Nassau, very rocky	55 	 Very limited Depth to hard bedrock Slope Frost action	 1.00 1.00 0.50	bedrock Slope	 1.00 1.00 0.15	Slope Droughty	 1.00 1.00 1.00 0.92
	' 	Frost action Large stones 	0.30 0.15 	=	0.10	_	

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	Pct. Of	 Local roads and st 	reets	Shallow excavation	ons	Landscaping	
		Rating class and limiting features		Rating class and limiting features 		Rating class and limiting features 	
624829	 	 	 	 	 	 	1
Manlius, very rocky-	44 	Very limited Slope Depth to hard bedrock Frost action Large stones	1.00 0.54 0.50 0.33	bedrock Slope Large stones	1.00 1.00 0.33 0.10	Large stones Droughty Depth to bedrock	 1.00 0.99 0.56 0.54 0.02
624832	i	 	i	! 	i		i
Nassau	50 	Very limited Depth to hard bedrock Slope Frost action Large stones	1.00 1.00 0.50	bedrock Slope Unstable excavation walls	1.00 1.00 0.50	Slope Droughty Large stones 	 1.00 1.00 1.00 0.92
Rock outcrop	45	 Not rated		Not rated		Not rated	
624841	İ	 		 	 	 	
Oquaga	60 	Very limited Slope Depth to hard bedrock Frost action Large stones	1.00 0.84 	bedrock Slope Unstable excavation walls	1.00 1.00 0.10	Droughty Depth to bedrock Large stones	 1.00 0.84 0.84 0.20
Rock outcrop	25	 Not rated 	!	 Not rated	! !	 Not rated	!
624845 Rock outcrop	 45	 Not rated 		 Not rated 	 	 Not rated 	
Farmington	35 	Very limited Depth to hard bedrock Slope Frost action	11.00	bedrock Slope	1.00 1.00 0.50	Slope Droughty	 1.00 1.00 0.97
Galway	 20 	 Very limited Slope Depth to hard bedrock Frost action 	 1.00 0.90 0.50	Depth to hard bedrock Slope	1.00 1.00 1.00	Depth to bedrock Droughty	 1.00 0.90 0.01
624846	į	İ	į	İ	İ	İ	į
Rock outcrop	40 	Not rated 	 	Not rated 	I 	Not rated 	1
Arnot	30 	Very limited Depth to hard bedrock Slope Frost action	11.00	bedrock Slope	1.00 1.00 0.50	Slope Droughty	 1.00 1.00 0.99
Rubble land	 20 	 Very limited Large stones Slope 	1.00 1.00	Large stones Slope	11.00		

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

<u> </u>	Pct.	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
i	map	Rating class and limiting features	•	Rating class and limiting features		Rating class and limiting features	
626816 Udifluvents, occasionally flooded	90		 1.00	excavation walls Depth to saturated zone	1.00 0.87 	Flooding 	 0.96 0.60
635458		 	 	i I	0 . 60 	i I I	!
Oquaga, very rocky 	55	Depth to hard bedrock Slope Frost action	0.84 0.63	bedrock Slope Unstable excavation walls	1.00 0.63 0.10	Depth to bedrock Slope Large stones	 0.84 0.84 0.63 0.20
Lackawanna, very rocky	20	 Companyor limited	! !	 Somewhat limited	! 	 Somewhat limited	
Tocky	30	Slope	 0.63 0.50 	Slope Dense layer	0.63 0.50	Large stones Slope	0.88 0.63
635459 Oquaga, very rocky 	50	Slope Depth to hard bedrock Frost action	1.00 0.84 0.50	bedrock Slope Unstable excavation walls	1.00 1.00 0.10	Droughty Depth to bedrock Large stones	 1.00 0.84 0.84 0.20
Lackawanna, very rocky 	35	Slope	 1.00 0.50 	Dense layer	1.00 0.50 0.10	Large stones	 1.00 0.88
740953 Delaware, rarely		 	 	 	 	 	
flooded 	80	•	 0.50 0.40 	•	0.10	Not limited - 	
740968 Nassau, very rocky 	55	Depth to hard bedrock Slope Frost action	11.00	bedrock Slope Large stones	1.00 0.63 0.15 0.10	Droughty Large stones Slope	 1.00 1.00 0.92 0.63

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	:. Local roads and st	treets	Shallow excavation	ons	 Landscaping 	
	np Rating class and t limiting features		Rating class and limiting features		Rating class and limiting features	
740968 Manlius, very rocky- 44			 Very limited	•	 Somewhat limited	
	Slope Depth to hard bedrock	0.63 0.54 	bedrock	1.00 0.63	Slope	0.99 0.63 0.56
 	Frost action Large stones 	0.50 0.33 	•	0.33 0.10 	· •	0.54 0.02
740969		!	 	! !	 	!
Nassau, very rocky 59	Depth to hard bedrock	1 1.00	Very limited Depth to hard bedrock	 1.00 	Very limited Depth to bedrock Slope	1.00 1.00
!	Slope Frost action	11.00	•	1.00 0.15	·	1.00 0.92
	Large stones	0.50 0.15 	•	0.10		
Manlius, very rocky- 4	 Very limited Slope	 1.00	 Very limited Depth to hard	 1.00	 Very limited Slope	 1.00
i	Depth to hard	10.54	•		Large stones	10.99
!	bedrock Frost action	 0.50	· -	1.00 0.33	·	10.56
İ	Large stones	10.33 1	•	0.10	· •	0.34 0.02
740971	 	 	 	 	 	1
Oquaga, very rocky 55	Somewhat limited Depth to hard bedrock	 0.84 	Very limited Depth to hard bedrock	 1.00 	Somewhat limited Droughty Depth to bedrock	 0.84 0.84
i	Slope	0.63	Slope	0.63	· •	10.63
	Frost action Large stones 	0.50 0.01 	excavation walls	0.10 0.01	İ	0.20
 Lackawanna, very	 	I I	I I	 	 	
rocky 30	·	•	Somewhat limited		Somewhat limited	1
	Slope Frost action 	0.63 0.50 	Dense layer Unstable	0.63 0.50 0.10	Slope	0.88 0.63
			excavation walls	 	I 	
740972 Oquaga, very rocky 50	 	 	 Very limited	 	 Very limited	1
	Slope Depth to hard	1.00 0.84	Depth to hard	11.00	_	1.00 0.84
!	bedrock Frost action	10 50	•	11.00	· •	
	Large stones	0.50 0.01 	excavation walls	0.10 0.01	i -	0.20
 Lackawanna, very	1	 	 	 	 	
rocky 3		 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
; ! !	Frost action	0.50 	Dense layer	0.50 0.10	Large stones	0.88

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation 	ons	 Landscaping 	
	_	Rating class and limiting features		Rating class and limiting features 		Rating class and limiting features	
740974 Oquaga	 60 61 1 1 1	Depth to hard bedrock Frost action	1.00 0.84 	bedrock Slope Unstable excavation walls	1.00 1.00 0.10	Droughty Depth to bedrock Large stones	 1.00 0.84 0.84 0.20
Rock outcrop	, 25 	 Not rated 	 	 Not rated 	 	 Not rated 	į
740975 Rock outcrop	 40 	 Not rated	 	 Not rated 	 	 Not rated 	i
Arnot	 30 	bedrock Slope	 1.00 1.00 0.50	bedrock Slope	1.00 1.00 1.50	Slope Droughty	 1.00 1.00 0.99
Rubble land	 20 	Large stones	 1.00 1.00	•	 1.00 1.00		
740987 Scio	 80 		 1.00 0.43 	saturated zone	1.00 0.10	saturated zone	 0.43
740988 Udifluvents, occasionally flooded	 90 	_	 1.00 	excavation walls Depth to saturated zone	1.00 0.87	Flooding 	 0.96 0.60
740991 Unadilla	 85 	_			0.10	 Not limited 	
740992 Unadilla	 85 		•	 Somewhat limited Unstable excavation walls	0.10	 Not limited 	
740995 Wellsboro, extremely stony		Frost action	0.50 0.19	saturated zone Dense layer	1.00 0.50 0.10	Large stones	 0.19 0.16

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

Map unit symbol and soil name	Pct.	, Local roads and st 	reets	Shallow excavation	ons	Landscaping	
	_	Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
740996 Wellsboro, extremely stony	 85 	 Somewhat limited Slope Frost action Depth to saturated zone	 0.63 0.50 0.19 	saturated zone Slope Dense layer	1.00 0.63 0.50 0.10	Depth to saturated zone Large stones	 0.63 0.19 0.16
741149 Lackawanna, extremely stony	 85 	 Somewhat limited Slope Frost action 	 0.63 0.50	Dense layer	0.63 0.50 0.10	Slope	 0.88 0.63
741150 Lackawanna, extremely stony	 85 	 Very limited Slope Frost action 	 1.00 0.50	Dense layer	1.00 0.50 0.10	Large stones	 1.00 0.88
801114 Oquaga	 75 	 Somewhat limited Depth to hard bedrock Frost action Large stones	0.84	bedrock Unstable excavation walls	1.00 0.10	Depth to bedrock Large stones 	 0.84 0.84 0.20
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	
810906 Oquaga	 75 	 Somewhat limited Depth to hard bedrock Frost action Large stones	0.84 0.50 0.01	bedrock Unstable excavation walls	1.00 0.10	Depth to bedrock Large stones 	 0.84 0.84 0.20
Rock outcrop	1 15	 Not rated 		 Not rated 	! !	 Not rated 	
1147464 Alden, extremely stony	 90 	 - Very limited Ponding Depth to saturated zone Frost action Low strength	 1.00 1.00 1.00 1.00	Depth to saturated zone Unstable	1.00 1.00 0.10	Depth to saturated zone	 1.00 1.00
1147467 Arnot, very rocky	55 	 Very limited Depth to hard bedrock Frost action 	 1.00 0.50	bedrock	1.00 0.50	Droughty	 1.00 0.99

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	map	·		Rating class and limiting features		Rating class and limiting features	
1147467 Lordstown, very rocky	 40 	Frost action	0.50 0.06	bedrock	1.00 1.00	i	 0.06
1147468	i i	· 	i	i İ	i	i I	i
Arnot	45 	Depth to hard bedrock Slope	1.00 1.00	bedrock Slope	1.00 1.00 0.50	Slope Droughty	 1.00 1.00 0.99
Lordstown	 40 	Slope Frost action	1.00 0.50 0.06	bedrock Slope	1.00 1.00 1.00	Depth to bedrock	 1.00 0.06
Rock outcrop	1 15	 Not rated	i	Not rated	İ	 Not rated	i
1147469	 	<u> </u>	1	 	 	 	1
Arnot	 60 	Depth to hard bedrock Slope		bedrock Slope	1.00 1.00 0.50	Slope Droughty	 1.00 1.00 0.99
Lordstown	 25 	Slope Frost action	 1.00 0.50 0.06	Depth to hard bedrock Slope	1.00 1.00 1.00	Depth to bedrock	 1.00 0.06
Rock outcrop	 15	 Not rated		 Not rated	! 	 Not rated	
1147470 Atherton, very poorly drained	 	 	 1.00 1.00 1.00 1.00	Depth to saturated zone Unstable	1.00 1.00 0.10	-	 1.00 1.00
Atherton, poorly drained	 30 	 Very limited Depth to saturated zone Frost action Low strength	 1.00 1.00 1.00	saturated zone Unstable	1.00 0.10	saturated zone	 1.00

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	Pct. Of	 Local roads and st 	reets	Shallow excavation	ons	 Landscaping 	
	map	·		Rating class and limiting features 		Rating class and limiting features	
1147471 Catden	 85 	Ponding Depth to saturated zone		Ponding Depth to saturated zone	 1.00 1.00 1.00	 	
1147474 Chippewa, extremely stony		Ponding Depth to saturated zone Frost action	1.00 1.00	Depth to saturated zone Dense layer	1.00 1.00 0.50 0.10	Depth to saturated zone Droughty	 1.00 1.00 0.49
1147474 Colonie	 80 	 Not limited 	 	 Very limited Unstable excavation walls	11.00	 Somewhat limited Droughty 	 0.47
1147478 Delaware, rarely flooded	 80 	Frost action	 0.50 0.40	Unstable	0.10	 Not limited 	
1147482 Fredon, very stony	50 	Frost action	1.00 0.96	saturated zone	1.00 1.00	 Somewhat limited Depth to saturated zone 	 0.96
Halsey, very stony	 40 	Ponding Depth to saturated zone	1.00 1.00	Ponding Depth to saturated zone	1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00
1147484 Hazen, very stony	 60 		 0.50	 Very limited Unstable excavation walls	11.00	 Somewhat limited Droughty 	 0.01
Hoosic, very stony	 35 	 Not limited 	 	 Very limited Unstable excavation walls	11.00	 Somewhat limited Droughty 	 0.10
1147490 Hoosic, very stony	 60 	 Somewhat limited Slope 	 0.63 	excavation walls	11.00	Droughty	 0.63 0.10
Hazen, very stony	 30 	 Somewhat limited Slope Frost action 	 0.63 0.50 	excavation walls	11.00	Droughty	 0.63 0.01

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavati 	ons	 Landscaping 	
	_	Rating class and limiting features		Rating class and limiting features 		Rating class and limiting features	
1147491 Hoosic, very stony	 50 	_	 1.00 	•	1.00 1.00	•	 1.00 0.10
Otisville, very stony	 40 	·	 1.00 	•	1.00 1.00	•	 1.00 0.95
1147492 Lackawanna, extremely stony	 85 		 0.50	•	0.50 0.10		 0.88
1147500 Wurtsboro, extremely stony	 90 	Depth to saturated zone	0.75 	saturated zone Unstable excavation walls	1.00 1.00	saturated zone 	 0.75
1147501 Wurtsboro, extremely stony		Depth to saturated zone	0.75 	saturated zone Unstable excavation walls	1.00 1.00	İ	 0.75
Swartswood, extremely stony	 40 		 0.50 	excavation walls	11.00	İ	
1147502 Wurtsboro, extremely stony	 60 1 1 1 1	Depth to saturated zone Slope	0.75	saturated zone Unstable excavation walls Slope	1.00 1.00	saturated zone Slope 	 0.75 0.63
Swartswood, extremely stony	 40 	Slope		excavation walls Slope Dense layer	11.00	- 	 0.63

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	Landscaping	
	map	`		Rating class and limiting features		Rating class and limiting features	
1147527 Udorthents	 60 	 Not limited 	 	· _	11.00	 Somewhat limited Droughty 	 0.01
Urban land	 40 	 Not rated 	! 	 Not rated 	! 	 Not rated 	!
1147532 Udorthents	 100 	 Not limited 	 	•	11.00	 Somewhat limited Droughty 	 0.01
1147533 Wurtsboro, extremely stony	 80 81 1 1 1	Slope Depth to saturated zone	1.00 0.75 	Slope Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Depth to saturated zone 	 1.00 0.75
Swartswood, extremely stony	 20 	Slope		Slope Unstable excavation walls	1.00 1.00	I I	 1.00
1948749 Arnot	 90 	Depth to hard bedrock	1.00 	Depth to hard bedrock	1.00 0.10	Droughty Gravel	 1.00 1.00 0.08 0.03
1948750 Arnot	90 	Depth to hard bedrock Slope	1.00 	Depth to hard bedrock Slope	1.00 0.63 0.10	Droughty Slope	 1.00 1.00 0.63 0.08 0.03
1948751 Arnot	 90 	bedrock Slope	 1.00 1.00 0.50	bedrock Slope	1.00 1.00 1.00	Slope Droughty	 1.00 1.00 1.00 0.08 0.03
1948774 Conotton	 90 	•	 0.50 	 Very limited Unstable excavation walls	11.00	 Somewhat limited Gravel Droughty 	 0.41 0.11
1948774 Conotton	95 	Slope	 0.63 0.50 	excavation walls	11.00	Gravel	 0.63 0.41 0.11

Table 9.--Roads and Streets, Shallow Excavations, and Landscaping--Continued

	 Pct. of	 Local roads and st 	reets	 Shallow excavation	ons	 Landscaping 	
	-	-		Rating class and limiting features		•	
1948776	 	I	 	I I	 	I I	
Conotton		Slope	11.00	Slope	1.00 1.00	Very limited Slope Gravel Droughty	 1.00 0.41 0.11
1948777	 	 	1	 	 	 	1
Conotton	, 95 	Slope	11.00	Slope	1.00 1.00	 Very limited Slope Gravel Droughty	 1.00 0.41 0.11
1948797	i	i I	i	İ	i	i i	i
Manlius	90 	Frost action	0.50 0.29 	Dense layer	1.00 0.50 0.10	Droughty Depth to bedrock	 0.32 0.31 0.29 0.15
1948802	i	İ	i	i	i	İ	i
Manlius	90 	Slope Frost action Depth to hard	0.63 0.50 0.29	Slope Dense layer	1.00 0.63 0.50 0.10	Large stones Droughty Depth to bedrock	 0.63 0.32 0.31 0.29 0.15
1948818 Manlius	 90 	Slope Frost action	1.00 0.50 0.29	Depth to hard bedrock Slope Dense layer	1.00 1.00 0.50 0.10	 Very limited Slope Large stones Droughty Depth to bedrock Gravel	 1.00 0.32 0.31 0.29 0.15
1948832	' 	! 	i	! 	i i	! 	i
Penargyl	90 		•	•	0.10	Somewhat limited Gravel 	 0.01
1948846	 	! 	<u> </u>	! 	! !	! 	i
Phelps	90 	Frost action		saturated zone	1.00 1.00		 0.43 0.08 0.01
1948854	I	l	I	I	I	I	I
Udorthents, loamy	95 	Frost action	 0.50 0.48 	saturated zone	1.00 1.00	saturated zone	 0.48
1948989 Urban land	 65	 Not rated 	 	 Not rated 	 	 Not rated 	
Delaware	 25 	•		•	11.00	 Not limited 	 - -

Table 10.--Sewage Disposal

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

and soil name		absorption fiel	ds	Sewage lagoons		
		Rating class and		 Rating class and limiting features 		
290836 Hoosic, very stony		Filtering capacity	1.00 1.00	Seepage 	 1.00 1.00 	
Otisville, very stony	 40 	Slope Seepage, bottom layer	11.00	I	 1.00 1.00 	
296265 Alden		Depth to saturated zone Slow water	1.00 1.00	content	 1.00 1.00 1.00	
296269 Fluvents, (alluvial land)		Flooding Depth to saturated zone	1.00 1.00 	Depth to saturated zone	 1.00 1.00 1.00	
296271 Alvira		saturated zone	1.00 	saturated zone Slope	 1.00 0.92 0.53	
Watson	 35 	 Very limited Depth to saturated zone Slow water movement 	 1.00 1.00 	saturated zone	 1.00 0.92 0.53	
296272 Bath	 85 	 Very limited Depth to saturated zone Slow water movement	1.00 1.00	Depth to	 0.92 0.68 0.53	

Table 10.--Sewage Disposal--Continued

and soil name	Pct.	absorption fiel	ds	Sewage lagoon	Sewage lagoons		
	map unit 	· 		 Rating class and limiting features 			
296273 Bath	 85 	Depth to Saturated zone Slow water movement	 1.00 1.00 0.63	Depth to saturated zone Seepage	 1.00 0.68 0.53		
296274 Bath	 85 	Depth to Saturated zone Slow water movement	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 0.68 0.53		
296275 Bath	 90 	saturated zone	 1.00 1.00	Depth to	 0.92 0.68 0.53		
296276 Bath	90 	saturated zone Slow water movement	 1.00 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 0.68 0.53		
296277 Benson	 55 	 Very limited Depth to bedrock Large stones 		· •	 1.00 10.53 0.48 0.32		
296278 Benson	 60 	Depth to bedrock	11.00	bedrock Slope	 1.00 1.00 0.53 0.48		
Rock outcrop 296279 Benson	 60	 Very limited Depth to bedrock Slope	 1.00 1.00 0.02	_	 1.00 1.00 0.53 0.48		
Rock outcrop	 25 	 Not rated 	' 	Large stones Not rated 	0.48 		

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fiel		 Sewage lagoons 		
	unit	· —		Rating class and limiting features 		
296280 Braceville	 90 1 	Depth to saturated zone Slow water	1.00 1.00 	Depth to saturated zone 	 	
296281 Braceville	90 	saturated zone	1.00 1.00 	Slope Depth to saturated zone	 1.00 1.00 0.92 0.44 	
296283 Buchanan	 90 	Depth to saturated zone	 1.00 1.00	saturated zone	 1.00 0.68 0.53	
296288 Chippewa	 48 	Depth to saturated zone	11.00	saturated zone	 1.00 0.53 0.08	
Norwich	 48 	saturated zone	1.00 	 Very limited Depth to saturated zone Seepage Slope	 1.00 0.53 0.08	
296289 Chippewa		Depth to saturated zone Slow water	1.00 1.00	saturated zone	 1.00 0.53 0.32	
Norwich	 47 	Depth to saturated zone	11.00	saturated zone	 1.00 0.53 0.32	
296295 Udorthents, cut and fill		 Not rated 	 	 Not rated 	 	

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fiel	ds	Sewage lagoon 	Sewage lagoons	
	map unit 			Rating class and limiting features 		
296297 Dekalb	 100 100 	layer Slope	1.00 1.00	bedrock Slope Seepage Large stones	 1.00 1.00 1.00 0.61	
296298 Dekalb		 Very limited Depth to bedrock Filtering capacity Slope Seepage, bottom layer Large stones	1.00 1.00 1.00	bedrock Slope Seepage Large stones 	 1.00 1.00 1.00 1.00 0.61	
296303 Hazleton	 100 		1.00 1.00 1.00	Seepage Large stones Depth to hard bedrock	 1.00 1.00 0.86 0.01 	
296304 Holly		 Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	 1.00 1.00 1.00 1.00 0.46	Depth to saturated zone	 1.00 1.00 1.00 1.00	
296311 Lackawanna	 40 	 Very limited Depth to saturated zone Slow water movement Slope	11.00	Depth to saturated zone Seepage	 1.00 0.64 0.53	
Bath	30 	 Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 0.68 0.53	

Table 10.--Sewage Disposal--Continued

Map unit symbol and soil name	Pct.	absorption fiel	ds	Sewage lagoons		
	map unit 	`		Rating class and limiting features 		
296312 Lackawanna	 80 	 Very limited Depth to	 1.00	· •	 0.92	
	 	saturated zone Slow water movement 	 1.00 	Depth to saturated zone Seepage Large stones 	0.64 0.53 0.01	
296313 Lackawanna	 80 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 0.64 0.53 0.01	
296315 Lackawanna	 80 	 Very limited Depth to saturated zone Slow water movement 	 1.00 1.00 	Depth to	 0.92 0.64 0.53 0.01	
296316 Lackawanna	80 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 	Depth to saturated zone Seepage	 1.00 0.64 0.53 0.01	
296317 Laidig	 100 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	Slope	 1.00 0.32 0.19	
296326 Lordstown	85 	 Very limited Depth to bedrock Slow water movement Large stones		bedrock Large stones	 1.00 1.00 0.96 0.92 0.53	
296327 Lordstown	 85 	 Very limited Depth to bedrock Slope Slow water movement Large stones		bedrock Slope Large stones	 1.00 1.00 1.00 0.96 0.53	
296328 Lordstown	 40 	 Very limited Depth to bedrock Slope Slow water movement		bedrock	 1.00 1.00 0.53	

Table 10.--Sewage Disposal--Continued

and soil name	Pct. of map	absorption fiel	ds	Sewage lagoons		
	unit			 Rating class and limiting features 		
296328 Oquaga		 Very limited Depth to bedrock Slope Slow water movement		bedrock	 1.00 1.00 0.53 0.10	
296329 Mardin	85 	 Very limited Depth to saturated zone Slow water movement		 Very limited Depth to saturated zone Slope Seepage	 1.00 0.92 0.53	
296330 Mardin	 85 	 Very limited Depth to saturated zone Slow water movement Slope	11.00	Depth to saturated zone Seepage	 1.00 1.00 0.53	
296331 Mardin	 85 	 Very limited Depth to saturated zone Slow water movement	1.00 	 Very limited Depth to saturated zone Slope Seepage	 1.00 0.92 0.53	
296332 Mardin	87 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 0.53	
296335 Meckesville	:	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 0.53	
296337 Meckesville	100 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 0.53	
296338 Morris	 80 	 Very limited Depth to saturated zone Slow water movement	1.00 1.00	saturated zone	 1.00 0.92	

Table 10.--Sewage Disposal--Continued

and soil name	Pct.	absorption fiel	ds	Sewage lagoon	Sewage lagoons		
	map unit 	`		 Rating class and limiting features 			
296339 Morris	 75 	 Very limited Depth to saturated zone	1 1 1 1 1 1 1 1 1 1	 Very limited Depth to saturated zone	 1.00		
	 	Slow water movement 	 1.00 	•	 0.53 0.46 0.32		
296340 Morris	 80 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 0.16	saturated zone Slope Seepage	 1.00 1.00 0.53 0.46		
296341 Freetown, mucky peat	100 100 	 Very limited Ponding Depth to saturated zone Seepage, bottom layer	 1.00 1.00 1.00 1.00	Organic matter content	 1.00 1.00 1.00 		
296342 Paupack, mucky peat (shallow)		 Very limited Ponding Depth to saturated zone Subsidence Slow water movement	 1.00 1.00 1.00 0.72	Organic matter content Depth to	 1.00 1.00 1.00 		
296343 Oquaga	 50 	 Very limited Depth to bedrock Slow water movement		· •	 1.00 0.92 0.53		
Lackawanna	' 35 	 Very limited Depth to saturated zone Slow water movement	11.00	Depth to	 0.92 0.64 0.53		
296344 Oquaga	 55 	 Very limited Depth to bedrock Slope Slow water movement		bedrock	 1.00 1.00 0.53		
Lackawanna	 30 	 Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00	Depth to saturated zone Seepage	 1.00 0.64 0.53		

Table 10.--Sewage Disposal--Continued

	 Pct. of map	absorption fiel	ds	Sewage lagoon 	s
	unit	Rating class and limiting features 			
296346 Oquaga	 50 51 1 1	· •		•	 1.00 0.53 0.32 0.10
Lackawanna	 35 	 Very limited Depth to saturated zone Slow water movement	1.00 	 Somewhat limited Depth to saturated zone Seepage Slope Large stones	 0.64 0.53 0.32 0.01
296347	İ	! 	i	 	i
Oquaga	60 	Slope		•	 1.00 1.00 0.53 0.10
Lackawanna	' 30 	 Very limited Depth to saturated zone Slow water movement Slope	1.00 	saturated zone Seepage	 1.00 0.64 0.53 0.01
296348 Philo	 85 	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00	Depth to saturated zone 	 1.00 1.00 1.00 1.00
296349 Pope	 90 	 Very limited Flooding Seepage, bottom layer Depth to saturated zone	 1.00 1.00 1.00	Seepage 	 1.00 1.00
296350 Pope	 90 	 Very limited Seepage, bottom layer Flooding Depth to saturated zone	1.00 0.40 0.40	Flooding 	 1.00 0.40

Table 10.--Sewage Disposal--Continued

and soil name	Pct. Of map	absorption fiel	ds	Sewage lagoon 	ıs
	unit	 Rating class and limiting features 		Rating class and limiting features 	
296351 Rexford, somewhat poorly drained	 	 	 	Depth to	 1.00 1.00
Rexford, poorly drained	35 	Depth to Saturated zone Slow water movement	 1.00 1.00 1.00 1.00	Depth to saturated zone 	 1.00 1.00
296355 Sheffield	 100 	 Very limited Ponding Depth to saturated zone Slow water movement	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00
296363 Dystrochrepts, very stony		Depth to bedrock Slope		bedrock Slope Seepage	 1.00 1.00 1.00 0.04
296369 Wayland	 100 	 Very limited Flooding Ponding Depth to saturated zone Slow water movement	 1.00 1.00 1.00 1.00	Flooding	 1.00 1.00 1.00
296376 Wellsboro	 80 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 1.00 0.92 0.53
296379 Wellsboro	 85 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 1.00 0.53

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fiel	ds	 Sewage lagoons 		
	map unit 			Rating class and limiting features 		
296385 Wyoming	 85 	Filtering capacity	 1.00 1.00	 Very limited Seepage 	 1.00 	
296386 Wyoming	 85 	capacity	 1.00 1.00 	Slope	 1.00 0.92 	
296387 Wyoming	 85 	capacity Seepage, bottom layer	 1.00 1.00 1.00 	Seepage 	 1.00 1.00 	
296388 Wyoming	 85 	Filtering capacity Slope	 1.00 1.00 1.00	Seepage 	 1.00 1.00 	
296389 Wyoming	 100 100 	Filtering capacity Slope	 1.00 1.00 1.00	Seepage 	 1.00 1.00 	
296390 Water	 100 	 Not rated 	 	 Not rated 	 	
297185 Edgemere	 42 	Ponding Depth to saturated zone	 1.00 1.00 1.00 1.00	Organic matter content Depth to saturated zone	 1.00 1.00 1.00 1.00 0.92 0.53	
Shohola	 42 	saturated zone Slow water movement	1.00 1.00	saturated zone Slope Seepage	 1.00 1.00 0.53	

Table 10.--Sewage Disposal--Continued

Map unit symbol and soil name	Pct. of map	absorption fiel	ds	Sewage lagoons		
	unit	· 		 Rating class and limiting features 		
297186 Edgemere	 75	 Very limited	i 	 Very limited	 	
	 	Ponding Depth to saturated zone Slow water movement 	İ	Ponding Organic matter content Depth to saturated zone Seepage Large stones	1.00 1.00 1.00 0.53 0.48	
297188 Manlius	 40 	•		bedrock	 1.00 1.00 0.53	
Arnot	35 	Slope			 1.00 1.00 0.83 0.53	
Rock outcrop	15 	Not rated 	 	Not rated -	 	
297189 Manlius	 40 	Depth to bedrock Slope		bedrock	 1.00 1.00 0.53	
Arnot	35 	Slope			 1.00 1.00 0.83 0.53	
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	
297190 Braceville	 82 	 Very limited Depth to saturated zone Slow water movement Seepage, bottom layer	 1.00 1.00 1.00 	Depth to saturated zone 	 1.00 0.94 	
297191 Wyalusing	 85 	 Very limited Flooding Depth to saturated zone Filtering capacity Seepage, bottom layer	 1.00 1.00 1.00 1.00	Seepage Depth to saturated zone 	 1.00 1.00 1.00 	

Table 10.--Sewage Disposal--Continued

	Pct. Of	absorption fiel	ds	Sewage lagoon	ıs
-	map unit 			 Rating class and limiting features 	
297192 Pope	 95 	 Very limited Flooding Seepage, bottom layer	 1.00 1.00	•	 1.00 1.00
297193 Paupack	 90 	Very limited Ponding Depth to saturated zone Subsidence Slow water movement	1.00 1.00	Organic matter content Depth to	 1.00 1.00 1.00 1.00
297196 Freetown	 94 	 Very limited Ponding Depth to saturated zone Seepage, bottom layer	1.00 1.00 		 1.00 1.00 1.00 1.00 1.00
297197 Manlius	 90 	 Very limited Depth to bedrock Slow water movement 		· •	 1.00 0.92 0.53
297198 Manlius	 86 	•		bedrock	 1.00 1.00 0.53
297201 Oquaga	75 	 Very limited Depth to bedrock Slope Slow water movement Large stones		bedrock Slope Seepage	 1.00 1.00 0.53 0.06
297203 Delaware	 93 	 Very limited Seepage, bottom layer Flooding	 1.00 0.40	Flooding	 1.00 0.40
297204 Delaware	 82 	 Very limited Seepage, bottom layer Flooding	 1.00 0.40	Slope	 1.00 0.92 0.40

Table 10.--Sewage Disposal--Continued

Map unit symbol and soil name	Pct.	absorption fiel	ds	Sewage lagoons		
	map unit 	· 		 Rating class and limiting features 		
297205 Delaware	 80 	•	1.00 0.96	Seepage Flooding	 1.00 1.00 0.40	
297209 Philo	 85 	 Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00	 - Very limited Flooding Seepage Depth to	 1.00 1.00 1.00	
297210 Barbour	 85 	Seepage, bottom layer	11.00	Seepage Depth to	 1.00 1.00 0.17	
297216 Wurtsboro	 92 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 0.99 0.53 0.32	
297217 Wurtsboro	 88 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 0.99 0.53	
297227 Arnot	 88 	 Very limited Depth to bedrock Slope 		-	 1.00 1.00 0.53	
297228 Arnot	 85 	 Very limited Depth to bedrock Slope 		_	 1.00 1.00 0.53	
297229 Wyoming	 90 	capacity	1.00 1.00 0.26	Large stones Slope 	 1.00 0.84 0.68	

Table 10.--Sewage Disposal--Continued

		absorption fiel	ds	Sewage lagoons	
	Rating class and limiting features 		•		
297230 Wyoming	 90 91 	capacity	 1.00 1.00 1.00	Seepage 	 1.00 1.00
297231 Wyoming	 90 	 Very limited Filtering capacity Slope Seepage, bottom layer Large stones	 1.00 1.00 1.00 1.00 1.00	Seepage Large stones 	 1.00 1.00 1.00 1.00
297236 Suncook	 91 	 Very limited Flooding Filtering capacity Seepage, bottom layer	 1.00 1.00 1.00	Seepage Slope	 1.00 1.00 0.08
297237 Mardin	 85 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 1.00 0.53 0.32
297238 Mardin	 85 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 0.63	Depth to saturated zone Seepage	 1.00 1.00 0.53
297239 Mardin	 85 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00 	saturated zone	 1.00 0.53 0.32 0.08
297240 Mardin	85 	 Very limited Depth to saturated zone Slow water movement Slope	11.00	Depth to saturated zone Seepage	 1.00 1.00 0.53 0.08
297241 Unadilla	 90 	 - Somewhat limited Slow water movement 	 0.46 	 - Somewhat limited Seepage 	 0.53

Table 10.--Sewage Disposal--Continued

Map unit symbol Pct. and soil name of map		absorption fiel	ds	Sewage lagoons		
	unit unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		
297242 Shohola	 62 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 1.00 0.53 0.32	
Edgemere	29 	Very limited Ponding Depth to saturated zone Slow water movement	 1.00 1.00 1.00 	Organic matter content	 1.00 1.00 1.00 1.00 0.53 0.32	
297243 Shohola	 62 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 0.53	
Edgemere	 29 	 Very limited Ponding Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00 1.00 	Organic matter content Slope Depth to	 1.00 1.00 1.00 1.00 0.53	
297244 Lordstown	 40 	 Very limited Depth to bedrock Slow water movement		· •	 1.00 0.53 0.32	
Swartswood	 35 	 Very limited Depth to saturated zone Slow water movement	11.00	Slope	 0.53 0.32 0.19	
297247 Chenango	 86 	 - Very limited Seepage, bottom layer 	 1.00 	 Very limited Seepage Slope 	 1.00 0.32	
297248 Chenango	 85 	 Very limited Seepage, bottom layer Slope 	1.00 0.63	Seepage	 1.00 1.00	

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fiel	ds	Sewage lagoons	
	unit	 Rating class and limiting features 		•	
297249 Chenango	 90 	Slope	 1.00 1.00	· •	 1.00 1.00
297253 Craigsville	 50 	Flooding Seepage, bottom layer Filtering capacity	11.00	Seepage Large stones Slope 	 1.00 1.00 1.00 0.08
Wyoming	 40 	 Very limited	1.00 	Slope	 1.00 0.32
297254 Pits, shale	 40	 Not rated 	 	 Not rated 	
Pits, gravel	40	 Not rated	į	 Not rated	į
298049 Wurtsboro, extremely stony	 90 	 		 - Very limited Depth to saturated zone Seepage Slope	 1.00 1.00 0.32
298050 Wurtsboro, extremely stony	 60 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 1.00 1.00 0.32
Swartswood, extremely stony	 40 	 Very limited Slow water movement	 1.00	 Very limited Seepage Slope	 1.00 0.32
298051 Wurtsboro, extremely stony	 60 	 	 1.00 1.00 0.63	Depth to saturated zone Seepage	 1.00 1.00 1.00
Swartswood, extremely stony	 40 	 Very limited Slow water movement Slope 	1.00 0.63	Seepage	 1.00 1.00

Table 10.--Sewage Disposal--Continued

and soil name	Pct. Of map	absorption fields		Sewage lagoons		
	map unit 	· — — — — — — — — — — — — — — — — — — —		 Rating class and limiting features 		
298075 Colonie		 Very limited Filtering capacity Seepage, bottom layer	 1.00 1.00	 Very limited Seepage Slope 	 1.00 1.092	
298188 Lackawanna, extremely stony	' 85 	 Very limited Slow water movement Slope	 1.00 1.00	 Very limited Slope Seepage 	 1.00 0.50	
298189 Lackawanna, extremely stony	, 85 	 - Very limited Slow water movement Slope	 1.00 0.63	Seepage	 1.00 0.50	
298221 Swartswood, extremely stony	 90 	 - Very limited Slow water movement	 1.00	 Very limited Seepage Slope	 1.00 0.32	
298222 Swartswood, extremely stony	 90 	 Very limited Slow water movement Slope	 1.00 0.63	 Very limited Slope Seepage 	 1.00 1.00	
298223 Swartswood, extremely stony	 85 	 - Very limited Slow water movement Slope	 1.00 1.00	Seepage	 1.00 1.00	
Delaware, rarely flooded	 80 	•	 1.00 0.40	Slope	 1.00 0.92 0.40	
298256 Delaware, rarely flooded	 80 	 - Very limited Seepage, bottom layer Flooding	 1.00 0.40	Flooding	 1.00 0.40 	
298257 Wallpack	 85 	 Very limited Slow water movement Slope 	1.00 0.63	Seepage	 1.00 0.50 	

Table 10.--Sewage Disposal--Continued

Map unit symbol Pct and soil name of		· -	ds	Sewage lagoons	
	map unit 	· 		 Rating class and limiting features	
298258 Wallpack		Slow water movement	 1.00 1.00	Seepage	 1.00 0.50
298259 Wallpack, extremely stony	85	· -	 1.00 	 Somewhat limited Seepage Slope 	 0.50 0.32
298260 Wallpack, extremely stony		Slow water movement	 1.00 0.63	Seepage	 1.00 0.50
298261 Wallpack	 85 	· -	 1.00	 Somewhat limited Seepage Slope	 0.50 0.32
298262 Wallpack, extremely stony		Slow water movement	 1.00 1.00	Seepage	 1.00 0.50
298265 Venango, extremely stony	 90 	Depth to saturated zone		 - Very limited Depth to saturated zone Seepage Slope	 1.00 0.50 0.32
298266 Venango, extremely stony	 85 	Depth to saturated zone Slow water movement	1.00	Depth to saturated zone Seepage	 1.00 1.00 0.50
298409 Swartswood, extremely stony	 90 	· -	 1.00 	 Very limited Seepage Slope	 1.00 0.32
298411 Swartswood, extremely stony	 90 	_	1.00 	 Very limited Slope Seepage	 1.00 1.00

Table 10.--Sewage Disposal--Continued

and soil name	Pct. Pct. of map	absorption fiel	ds	Sewage lagoons	
	unit	· —		Rating class and limiting features	
298413 Swartswood, extremely stony	 85 	· •	 1.00	 Very limited Slope Seepage 	 1.00 1.00
318498 Hazen, very stony	 60 	Seepage, bottom layer		Slope	 1.00 0.92
Hoosic, very stony		· •	1.00 	Slope	 1.00 0.92
318533 Hazen, very stony	 50 	Seepage, bottom layer	•	I	 1.00
Hoosic, very stony	 40 	_	1.00 	 Very limited Seepage 	 1.00
319783 Catden	85 	Depth to saturated zone	1.00 1.00 	•	 1.00 1.00 1.00 1.00 1.00
319784 Fredon, very stony	 50 	Depth to Saturated zone Seepage, bottom layer	11.00	Depth to saturated zone 	 1.00 1.00
Halsey, very stony	 	Ponding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00 1.00	Seepage Depth to saturated zone 	 1.00 1.00 1.00

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fields		Sewage lagoons		
	unit	' 		Rating class and limiting features		
543222 Andover, extremely stony	 55 	Depth to saturated zone	11.00	 - Very limited Depth to saturated zone Seepage Slope	 1.00 0.53 0.32	
Buchanan, extremely stony		Depth to saturated zone		 Somewhat limited Depth to saturated zone Seepage Slope	 0.94 0.53 0.32	
543243 Berks	 65 	Depth to bedrock	1.00 1.00	bedrock	 1.00 1.00 1.00	
Weikert	 25 	Depth to bedrock	1.00 1.00	bedrock	 1.00 1.00 1.00	
543246 Buchanan	 75 	saturated zone		 Somewhat limited Depth to saturated zone Slope Seepage	 0.94 0.92 0.53	
543247 Buchanan, extremely stony		Depth to saturated zone			 0.94 0.53 0.32	
543257 Chippewa	 90 	saturated zone	 1.00 1.00 	content	 1.00 1.00 1.00 10.53	
543258 Chippewa	90 	saturated zone	 1.00 1.00 	content	 1.00 1.00 1.00 0.68 0.53	

Table 10.--Sewage Disposal--Continued

Map unit symbol and soil name	Pct. Of map	absorption fields		Sewage lagoons		
	map unit 			 Rating class and limiting features 		
543259 Chippewa, extremely	 	 	 	 	 	
stony	90 	Very limited Depth to saturated zone Slow water movement 	1.00 	Very limited Organic matter content Depth to saturated zone Seepage Slope	 1.00 1.00 0.53 0.32	
543271 Delaware	90 	 Very limited Seepage, bottom layer Flooding		Flooding	 1.00 0.40	
543276 Fluvaquents	 85 	 Very limited Flooding Depth to saturated zone Slow water movement	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00 	
543292 Hazleton, extremely stony		 Very limited Seepage, bottom layer Filtering capacity Slope Depth to bedrock Large stones	1.00 1.00 1.00	Seepage Large stones Depth to hard bedrock	 1.00 1.00 0.98 0.08	
543293 Hazleton, extremely stony		Slope	1.00 1.00 	Seepage Large stones 	 1.00 1.00 0.98	
543299 Laidig, extremely stony	 90 	 Very limited Depth to saturated zone Slow water movement	11.00	saturated zone	 1.00 1.00 0.32	
543300 Laidig, extremely stony	 90 90 	 	1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 1.00	

Table 10.--Sewage Disposal--Continued

Map unit symbol P and soil name		absorption fiel	ds	Sewage lagoons	
	map unit 			Rating class and limiting features	
543304 Laidig	 50 51 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 1.00
Rubble land	 40 	capacity Slope Large stones	1.00 1.00 1.00 1.00	Large stones Seepage 	 1.00 1.00 1.00
543318 Rubble land	 75 	 Very limited Filtering capacity Large stones Seepage, bottom layer Slope Depth to bedrock	1.00 1.00 1.00 	Seepage Slope	 1.00 1.00 1.00
543327 Swartswood	 90 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	Seepage	 0.92 0.53 0.02
543328 Swartswood	 90 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00 	Seepage Depth to saturated zone	 1.00 0.53 0.02
543330 Swartswood, extremely stony	 50 51 1 1	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00 	Slope	 0.53 0.32 0.02
Wurtsboro, extremely stony	 30 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00 1.00	saturated zone	 0.75 0.53 0.32

Table 10.--Sewage Disposal--Continued

and soil name	Pct. Pct. of	absorption fiel	ds	Sewage lagoon 	ıs
	map unit 	· —		 Rating class and limiting features 	
543331 Swartswood, extremely stony	 50 	Depth to Saturated zone Slow water movement	11.00	Seepage Depth to saturated zone	 1.00 0.53 0.02
Wurtsboro, extremely stony	 30 	Depth to Saturated zone Slow water movement	11.00	Depth to saturated zone Seepage	 1.00 0.75 0.53
543359 Volusia	 85 	saturated zone	 1.00 1.00	saturated zone	 1.00 0.68 0.53
543360 Volusia, extremely stony	 85 	Depth to saturated zone	 1.00 1.00	saturated zone	 1.00 0.53 0.32
543374 Wurtsboro	 90 	 Very limited Depth to saturated zone Slow water movement	 1.00 1.00	Depth to	 0.92 0.75 0.53
543375 Wurtsboro	 90 	movement	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 0.75 0.53
612280 Scio	 80 	 Very limited Depth to saturated zone Slow water movement	11.00	saturated zone	 1.00 0.53
612666 Colonie	 80 	capacity	1.00 1.00 	ĺ	 1.00

Table 10.--Sewage Disposal--Continued

and soil name	Pct.	absorption fiel	ds	Sewage lagoons	
	map unit 			 Rating class and limiting features 	
612668 Hoosic, very stony		Filtering capacity Seepage, bottom layer	1.00 	Seepage 	 1.00 1.00
Hazen, very stony	 30 	Seepage, bottom layer	11.00	Seepage 	 1.00 1.00
612724 Lordstown, very rocky	 50 	Depth to bedrock Slope		bedrock Slope	 1.00 1.00
Wallpack, very rocky	 40 		 1.00 1.00	Seepage	 1.00 0.50
612732 Atherton, very poorly drained	 60 		1.00 1.00 	Depth to Saturated zone Seepage	 1.00 1.00 1.00
Atherton, poorly drained	 30 	 Very limited Depth to saturated zone Slow water movement	1.00 0.50	content	 1.00 1.00 0.50
612738 Fluvaquents, occasionally flooded	 		1.00 1.00 1.00 1.00 0.50	Seepage Depth to saturated zone 	 1.00 1.00 1.00

Table 10.--Sewage Disposal--Continued

and soil name	Pct. Pct. of map	absorption fiel	ds	Sewage lagoons 	
· -	unit	Rating class and limiting features 		Rating class and limiting features 	
612753 Wallpack, aeolian mantle, very stony-	 85 	 Somewhat limited Slope Slow water movement	 0.63 0.50	•	 1.00 0.50
612756 Wallpack, aeolian mantle, very stony-	 85 	 Somewhat limited Slow water movement	 0.50	 Somewhat limited Seepage Slope	 0.50 0.32
612757 Wallpack, aeolian mantle, very stony-	 85 	 Very limited Slope Slow water movement	 1.00 0.50		 1.00 0.50
612767 Wellsboro, extremely stony	 85 	 - Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 0.63	Depth to saturated zone Seepage	 1.00 0.75 0.50
612768 Wellsboro, extremely stony	 85 	 - Very limited Depth to saturated zone Slow water movement		 Somewhat limited Depth to saturated zone Seepage Slope	
613393 Alden, extremely stony	 90 	 Very limited Ponding Depth to saturated zone Slow water movement	 1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00
613447 Unadilla	 85 	•	 1.00 0.47	l	 1.00
613448 Unadilla	85 	 Very limited Seepage, bottom layer Slow water movement	1.00 0.47	Slope	 1.00 0.92

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fiel	ds	Sewage lagoons		
	unit	Rating class and limiting features		-		
614075 Wurtsboro, extremely stony	 80 	Depth to	11.00	 Very limited Slope	 1.00	
	 	movement	11.00	Depth to saturated zone Seepage 	1.00 1.00 	
Swartswood, extremely stony	 20 	Slow water movement	11.00	Seepage	 1.00 1.00	
620179 Arnot, very rocky	 55 	 Very limited Depth to bedrock 		 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.50	
Lordstown, very rocky	40 	Depth to bedrock		· •	 1.00 1.00 0.50	
620180	!	 	<u> </u>		!	
Arnot	45 	Depth to bedrock		_	 1.00 1.00 0.50	
Lordstown	 40 	•	1.00 1.00 0.50	bedrock	 1.00 1.00 0.50	
Rock outcrop	1 15	 Not rated		 Not rated 		
620181 Arnot	 60 	Depth to bedrock	1.00 1.00	 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.50	
Lordstown	 25 	Depth to bedrock Slope Slow water	11.00	bedrock	 1.00 1.00 0.50	
Rock outcrop		 Not rated 		 Not rated 	 	

Table 10.--Sewage Disposal--Continued

		absorption fiel	ds	Sewage lagoon 	s
	map unit 			 Rating class and limiting features 	
623089 Chippewa, extremely stony		Ponding Depth to saturated zone	 	Depth to saturated zone	 1.00 1.00 0.50
623109 Farmington	 50 	 Very limited Depth to bedrock 		 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.50
Rock outcrop	I 40 	 Not rated 	 	 Not rated 	
624811 Galway, very rocky	80 	Depth to bedrock Slope		bedrock	 1.00 1.00 0.50
624813 Lackawanna, extremely stony	 85 	_	 1.00	 Somewhat limited Seepage Slope	 0.50 0.32
624816 Lordstown, very rocky	 50 	Depth to bedrock Slope		bedrock	 1.00 1.00 0.50
Wallpack, very rocky	35 	Slow water movement	 1.00 0.63	Seepage	 1.00 0.50
624822 Lordstown	 50 	Depth to bedrock Slope		bedrock	 1.00 1.00 0.50
Wallpack	 35 	movement Slope	1.00 1.00	Seepage	 1.00 0.50

Table 10.--Sewage Disposal--Continued

and soil name	Pct. of map	absorption fields		Sewage lagoons		
	unit			Rating class and limiting features		
624823	; i	i I	; 	 	i 	
Lordstown	50 	Very limited Depth to bedrock Slope Slow water movement		bedrock	 1.00 1.00 0.50	
Wallpack	 35 	· •	 1.00 0.63	Seepage	 1.00 0.50 	
624824 Lordstown	 50 	Depth to bedrock	•	·	 1.00 0.50 0.32	
Wallpack	 35 	 Very limited Slow water movement	 1.00 	 Somewhat limited Seepage Slope	 0.50 0.32	
624826 Manlius, very rocky-	 60 	Depth to bedrock Slope Seepage, bottom layer		bedrock Slope Large stones	 1.00 1.00 1.00	
Nassau, very rocky	 25 	Depth to bedrock Slope Seepage, bottom layer	1.00 1.00	bedrock Slope Large stones	 1.00 1.00 1.00	
624827 Nassau, very rocky		Depth to bedrock	11.00	 Very limited Depth to hard bedrock Seepage Large stones Slope	 1.00 1.00 0.91 0.32	
Manlius, very rocky-	 44 	 Very limited Depth to bedrock Seepage, bottom layer Large stones		bedrock Seepage	 1.00 1.00 0.98 0.32	
624828 Nassau, very rocky	 55 	 Very limited Depth to bedrock Seepage, bottom layer Slope Large stones		bedrock Slope Seepage	 1.00 1.00 1.00 1.00 0.91	

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fields		Sewage lagoons	
	map unit 			Rating class and limiting features 	
624828 Manlius, very rocky-	 44 	Depth to bedrock Seepage, bottom layer Slope	1.00 1.00	bedrock Slope Seepage	 1.00 1.00 1.00 0.98
624829 Nassau, very rocky	55 	Depth to bedrock Slope Seepage, bottom layer		bedrock Slope Seepage	 1.00 1.00 1.00 1.00
Manlius, very rocky-	 44 	Depth to bedrock Slope Seepage, bottom layer		bedrock Slope Seepage	 1.00 1.00 1.00 0.98
624832 Nassau	 50 	Seepage, bottom layer		bedrock Slope Large stones	 1.00 1.00 1.00 1.00
Rock outcrop	 45 	 Not rated 	 	 Not rated 	
624841 Oquaga	 60 	Slow water movement		bedrock Slope Seepage	 1.00 1.00 0.50 0.10
Rock outcrop	25 	Not rated 	į i	Not rated 	į
624845 Rock outcrop	 45 	 Not rated 	 	 Not rated 	
Farmington		 Very limited Depth to bedrock Slope 		· •	 1.00 1.00 0.50
Galway	20 	Depth to bedrock Slope	1.00 1.00 0.50	bedrock	 1.00 1.00 0.50

Table 10.--Sewage Disposal--Continued

and soil name		Septic tank absorption fiel	ds	Sewage lagoons	
		Rating class and limiting features 		•	
624846 Rock outcrop	 40	 Not rated	 	 Not rated	
Arnot	 30 	Very limited	 1.00	 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.50
Rubble land		Filtering capacity Slope Large stones	11.00	 Very limited Slope Large stones Seepage 	 1.00 1.00 1.00
626816 Udifluvents, occasionally flooded		Flooding Depth to saturated zone	1.00 1.00 	 - Very limited Flooding Seepage Depth to saturated zone	 1.00 1.00 1.00
635458 Oquaga, very rocky	 55 	Depth to bedrock Slope Slow water movement	11.00	Seepage	 1.00 1.00 0.50 0.10
Lackawanna, very rocky	 30 	 Very limited Slow water movement Slope	 1.00 0.63	Seepage	 1.00 0.50
635459 Oquaga, very rocky	 50 	 Very limited Depth to bedrock Slope Slow water movement Large stones		bedrock Slope Seepage	 1.00 1.00 0.50 0.10
-	 35 	 Very limited Slow water movement Slope 	 1.00 1.00	 Very limited Slope Seepage 	 1.00 0.50
740953 Delaware, rarely flooded	 80 	 Very limited Seepage, bottom layer Flooding 	1.00 0.40	Flooding	 1.00 0.40

Table 10.--Sewage Disposal--Continued

and soil name	of	Pct. Septic tank of absorption fields		Sewage lagoons	
	map unit 			 Rating class and limiting features 	
740968	 	 	 	 	
Nassau, very rocky	55 	Depth to bedrock		bedrock Slope Large stones	 1.00 1.00 0.91
Manlius, very rocky-	 44	ĺ	İ	' Very limited	į
	 	Depth to bedrock Seepage, bottom layer Slope Large stones		Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 0.98
T.100.00		Large Scones		Large Scones	
740969 Nassau, very rocky	 55 	Depth to bedrock Slope		bedrock Slope Seepage	 1.00 1.00 1.00 0.91
Manlius, very rocky-	 44	 Very limited	 	 Very limited	
	 	Depth to bedrock Slope Seepage, bottom layer Large stones		Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 0.98
740971	 	 	 	 	
Oquaga, very rocky	55 	Very limited Depth to bedrock Slope Slow water movement Large stones		bedrock Slope Seepage	 1.00 1.00 0.50 0.10
Lackawanna, very	 20	 	į	 	į
rocky	30 	Very limited Slow water movement Slope	 1.00 0.63	Seepage	1.00 0.50
740972	! !	! !	!	 	!
Oquaga, very rocky	50 	Very limited Depth to bedrock Slope Slow water movement Large stones		bedrock Slope Seepage	 1.00 1.00 0.50 0.10
Lackawanna, very rocky	 35 	 Very limited Slow water movement Slope	1.00 1.00	Seepage	 1.00 0.50

Table 10.--Sewage Disposal--Continued

Map unit symbol Po and soil name o		absorption fiel	ds	Sewage lagoons	
	map unit 			 Rating class and limiting features 	
740974 Oquaga		Slope Slow water movement	1.00 1.00 0.50	 Very limited Depth to hard bedrock Slope Seepage Large stones	 1.00 1.00 0.50 0.10
Rock outcrop	 25	 Not rated 	 	 Not rated	
740975 Rock outcrop	 40	 Not rated	 	 Not rated	
Arnot		 Very limited Depth to bedrock Slope 	1.00 1.00	 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.50
Rubble land	 20 	Filtering capacity Slope Large stones	 1.00 1.00 1.00 1.00	Large stones Seepage 	 1.00 1.00 1.00
740987 Scio	 80 	saturated zone	11.00	 Very limited Depth to saturated zone Seepage 	 1.00 0.53
740988 Udifluvents, occasionally flooded	 90 	Flooding Depth to	1.00 1.00	 - Very limited Flooding Seepage Depth to saturated zone	 1.00 1.00 1.00
740991 Unadilla	, 85 	Seepage, bottom layer	 1.00 0.47 	l	 1.00
740992 Unadilla	85 	· •	1.00 0.47 	Slope	 1.00 0.92

Table 10.--Sewage Disposal--Continued

and soil name	•	Pct. Septic tank		Sewage lagoons	
	map unit 	'		 Rating class and limiting features 	
740995 Wellsboro, extremely stony	 85 	 - Very limited Depth to saturated zone Slow water movement	 1.00 1.00	saturated zone	 0.75 0.50 0.32
740996 Wellsboro, extremely stony	 85 	 	11.00	Depth to saturated zone Seepage	 1.00 0.75 0.50
741149 Lackawanna, extremely stony	 85 	 - Very limited Slow water movement Slope	 1.00 0.63	Seepage	 1.00 0.50
741150 Lackawanna, extremely stony	, 85 	 Very limited Slow water movement Slope	 1.00 1.00	Seepage	 1.00 0.50
801114 Oquaga	 75 	 Very limited Depth to bedrock Slow water movement Large stones		bedrock Slope	 1.00 1.00 0.50 0.10
Rock outcrop	 15 	 Not rated 	 	 Not rated 	
810906 Oquaga	 75 	 Very limited Depth to bedrock Slow water movement Large stones	1.00 0.50	bedrock Slope	 1.00 1.00 0.50 0.10
Rock outcrop	I 15 	 Not rated 	 	 Not rated 	
1147465 Alden, extremely stony		 - Very limited Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Depth to saturated zone	 1.00 1.00

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fiel	absorption fields		Sewage lagoons		
	unit unit 			Rating class and limiting features			
1147467 Arnot, very rocky	 55 	 Very limited Depth to bedrock 		 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.50		
Lordstown, very rocky	 40 	Depth to bedrock Slow water	11.00	bedrock Slope	 1.00 1.00 0.50		
1147468 Arnot	 45 	Depth to bedrock	1.00 1.00	 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.50		
Lordstown		Depth to bedrock Slope Slow water	11.00	bedrock	 1.00 1.00 0.50		
Rock outcrop	 15	 Not rated	 	 Not rated			
1147469 Arnot	 60 	Depth to bedrock		_	 1.00 1.00 0.50		
Lordstown	 25 	Depth to bedrock Slope Slow water	1.00 1.00 0.50	bedrock Slope	 1.00 1.00 0.50		
Rock outcrop	 15	 Not rated	 	 Not rated	!		
1147470 Atherton, very poorly drained	 60 60 1 1 1 1	Ponding Depth to saturated zone Seepage, bottom layer	 	Depth to Saturated zone Seepage	 1.00 1.00 1.00 		

Table 10.--Sewage Disposal--Continued

and soil name	Pct.	absorption fiel	ds	Sewage lagoons	
•		 Rating class and limiting features 		-	
1147470 Atherton, poorly drained	 30	 Very limited	 	 Very limited	
	 	saturated zone	 0.50	Organic matter content Depth to saturated zone Seepage	1
1147471 Catden	85 	Ponding Depth to saturated zone Slow water	1.00 1.00 	Organic matter content	 1.00 1.00 1.00 1.00
1147474 Chippewa, extremely stony		Ponding Depth to saturated zone	1.00 1.00 	 - Very limited Ponding Depth to saturated zone Seepage	 1.00 1.00 0.50
1147475 Colonie	 80 	Filtering	1.00 	l	 1.00
1147478 Delaware, rarely flooded	 80 	Seepage, bottom layer	1.00 	 - Very limited Seepage Slope Flooding	 1.00 0.92 0.40
1147482 Fredon, very stony	50 	Depth to saturated zone Seepage, bottom layer Filtering	11.00	Depth to saturated zone 	 1.00 1.00
Halsey, very stony	 	Ponding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00 1.00	Seepage Depth to saturated zone 	 1.00 1.00 1.00

Table 10.--Sewage Disposal--Continued

and soil name	 Pct. of map	absorption fiel	Sewage lagoons		
	unit	 Rating class and limiting features 		•	
1147485 Hazen, very stony		Seepage, bottom layer		Slope	 1.00 0.92
Hoosic, very stony			1.00 	· •	 1.00 0.92
1147490 Hoosic, very stony	 60 	Filtering capacity Seepage, bottom layer Slope	1.00 	i I	 1.00 1.00
Hazen, very stony		 Very limited Seepage, bottom layer Filtering capacity	İ	Seepage 	 1.00 1.00
1147491 Hoosic, very stony		Filtering capacity	1.00 1.00	Seepage 	 1.00 1.00
Otisville, very stony		Seepage, bottom	1.00 1.00	Seepage 	 1.00 1.00
1147492 Lackawanna, extremely stony	 85 	-	 1.00 	 Somewhat limited Seepage Slope 	 0.50 0.32
1147500 Wurtsboro, extremely stony	 90 	Depth to saturated zone	 1.00 1.00	saturated zone	 1.00 1.00 0.32

Table 10.--Sewage Disposal--Continued

= =	 Pct. of map	absorption fiel	ds	Sewage lagoons		
· -	map unit 	·		 Rating class and limiting features 		
1147501 Wurtsboro, extremely stony	 60 	 	 1.00 1.00	saturated zone	 1.00 1.00 0.32	
Swartswood, extremely stony		·	 1.00	 Very limited Seepage Slope	 1.00 0.32	
1147502 Wurtsboro, extremely stony	 60 	Depth to saturated zone Slow water movement	 1.00 1.00 0.63	Depth to saturated zone Seepage	 1.00 1.00 1.00	
Swartswood, extremely stony		·	 1.00 0.63	Seepage	 1.00 1.00	
1147527 Udorthents		 Very limited Seepage, bottom layer		 Very limited Seepage Slope	 1.00 0.32	
Urban land	40	 Not rated	į	 Not rated	į	
1147532 Udorthents	 100 	 Very limited Seepage, bottom layer 		 Very limited Seepage Slope 	 1.00 0.32	
1147533 Wurtsboro, extremely stony	 80 81 	 Very limited Depth to saturated zone Slow water movement Slope	 1.00 1.00 1.00	Depth to saturated zone Seepage	 1.00 1.00 1.00	
Swartswood, extremely stony	 20 	· -	 1.00 1.00	Seepage	 1.00 1.00 	
1948749 Arnot	 90 	 Very limited Depth to bedrock 		 Very limited Depth to hard bedrock Slope Seepage	 1.00 0.92 0.53	

Table 10.--Sewage Disposal--Continued

Map unit symbol Po and soil name o		absorption fiel	ds	Sewage lagoons		
	map unit 			 Rating class and limiting features 		
1948750 Arnot	 90 1 	 Very limited Depth to bedrock Slope 	11.00	 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.53	
1948751 Arnot	 90 	 Very limited Depth to bedrock Slope 	11.00	 Very limited Depth to hard bedrock Slope Seepage	 1.00 1.00 0.53	
1948774 Conotton		 - Very limited Filtering capacity Seepage, bottom layer	1.00 	Slope	 1.00 0.92 	
1948775 Conotton	95 	capacity Seepage, bottom layer	1.00 	I	 1.00 1.00 	
1948776 Conotton	 95 	capacity Slope	 1.00 1.00 1.00	Seepage 	 1.00 1.00 	
1948777 Conotton	l	capacity Slope	11.00	Seepage 	 1.00 1.00 	
1948797 Manlius	90 1 	 Very limited Depth to bedrock Slow water movement 		=	 1.00 0.92 0.53	
1948802 Manlius	90 	 Very limited Depth to bedrock Slope Slow water movement	1.00 0.63 0.46	bedrock	 1.00 1.00 0.53	

Table 10.--Sewage Disposal--Continued

·			_	Sewage lagoons		
·	of	•	.ds			
	map unit	· — — — — — — — — — — — — — — — — — — —	•	 Rating class and limiting features 	•	
948818 Manlius 	90	 Very limited Depth to bedrock Slope Slow water movement		bedrock	 1.00 1.00 0.53	
948832		I	i	i İ	i	
Penargy1 	90	Very limited Seepage, bottom layer Slow water movement	•	Seepage	 0.92 0.53 	
948846		! 	i	! 	i	
Phelps 	90	Very limited Depth to saturated zone Seepage, bottom layer Slow water movement	 1.00 1.00 0.46	Depth to saturated zone Slope	 1.00 1.00 0.68	
948855		İ	i	İ	i	
Udorthents, loamy 	95	Very limited Depth to saturated zone Seepage, bottom layer	1.00 	Very limited Depth to saturated zone Seepage Slope	 1.00 1.00 0.32	
948989		 	i		i	
Urban land	65	Not rated	!	Not rated	1	
 Delaware 	25	 Very limited Seepage, bottom layer Flooding 		Flooding	 1.00 0.40 0.32	
 		layer	İ	Flooding		

Table 11. -- Source of Gravel and Sand

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table]

	 Pct. of			Sand source	
1	map unit 	Ī	 Value 	 	 Value _
290836 Hoosic, very stony			0.00	 Fair Thickest layer Bottom layer	 0.01 0.20
Otisville, very stony	•	 Poor Bottom layer Thickest layer	•	 Good Thickest layer 	 0.19
296265 Alden	 100 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00
296269 Fluvents, (alluvial land)	70	•	0.00	 Fair Bottom layer Thickest layer	 0.00
296271 Alvira			•	 Poor Bottom layer	 0.00
Watson	•	Thickest layer Poor Bottom layer Thickest layer	 0.00	Thickest layer Poor Bottom layer Thickest layer	0.00 0.00 0.00
296272 Bath	 85 	 Poor Bottom layer Thickest layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00
296273 Bath	 85 	 Poor Bottom layer Thickest layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00
296274 Bath	:	 - Poor Bottom layer Thickest layer 	10.00	 - Poor Bottom layer Thickest layer 	 0.00 0.00
296275 Bath	 90 	 Poor Bottom layer Thickest layer 	10.00	 Poor Bottom layer Thickest layer 	 0.00 0.00

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 	 Rating class 	 Value 	 Rating class 	 Value 	
296276 Bath	İ	Bottom layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296277 Benson	İ	Thickest layer	0.00	_	10.00	
296278 Benson	İ	Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Rock outcrop	 20 	 Not rated 		 Not rated 		
296279 Benson	ĺ	Thickest layer	0.00	•	 0.00 0.00	
Rock outcrop	I 25 I	 Not rated 		 Not rated 		
296280 Braceville	ĺ	Bottom layer	10.00	•	 0.00 0.00	
296281 Braceville	ĺ	Bottom layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296283 Buchanan	•	Bottom layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296288 Chippewa		Bottom layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Norwich	•	•	0.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	
296289 Chippewa	 4 7 	Bottom layer	0.00	 Poor Bottom layer Thickest layer	10.00	
Norwich	 47 	Bottom layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296295 Udorthents, cut and fill		 Not rated 	 	 Not rated 		

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 	•	 Value 	 Rating class 	 Value 	
296297 Dekalb			0.00	•	 0.03 0.04	
296298 Dekalb	•	Thickest layer	0.00	•	 0.03 0.04	
296303 Hazleton	İ		0.00	 - Fair Bottom layer Thickest layer	 0.06 0.06	
296304 Holly	 100 	Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.64	
296311 Lackawanna	İ	Bottom layer	0.00	•	 0.00 0.00	
Bath	Ī	Bottom layer	0.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	
296312 Lackawanna	İ	Bottom layer	0.00	 Poor Bottom layer Thickest layer	10.00	
296313 Lackawanna		_	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296315 Lackawanna	•	 Poor Bottom layer Thickest layer	•	· -	10.00	
296316 Lackawanna	 80 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	
296317 Laidig	 100 	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	· -	1 1 1 0 . 00 1 0 . 00	
296326 Lordstown	 85 	 - Poor Thickest layer Bottom layer 	 0.00 0.00	•	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

and soil name	 Pct. of		e 	Sand source		
	map unit 	 Rating class _	 Value 	 Rating class 	 Value 	
296327 Lordstown	İ	Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296328 Lordstown	İ	Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Oquaga		Bottom layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296329 Mardin	•	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296330 Mardin	•	Bottom layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 1 0 . 00 1 0 . 00	
296331 Mardin	İ	Bottom layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	
296332 Mardin	•	Bottom layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	
296335 Meckesville	•	Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296337 Meckesville		Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296338 Morris	 80 		10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296339 Morris	 75 	Bottom layer	10.00	 Poor Bottom layer Thickest layer	 0.00	
296340 Morris	•	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
296341 Freetown, mucky peat	 100 	 Not rated 		 Not rated 	 	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			 Sand source 	Sand source	
	map unit 		 Value 	 Rating class 	 Value 	
296342 Paupack, mucky peat (shallow)	100	 Poor Thickest layer Bottom layer	 0.00 0.00	·	 0.00 0.02	
296343 Oquaga	 50 	 Poor Bottom layer Thickest layer	•	 Poor Bottom layer Thickest layer	10.00	
Lackawanna	 35 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	10.00	
296344 Oquaga	 55 	Bottom layer	•	 Poor Bottom layer Thickest layer	 0.00 0.00	
Lackawanna	 30 	 Poor Bottom layer Thickest layer 	•	 Poor Bottom layer Thickest layer 	 0.00 0.00	
296346 Oquaga	 50 	_	•	 Poor Bottom layer Thickest layer	 0.00 0.00	
Lackawanna	 35 	 Poor Bottom layer Thickest layer 	0.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	
296347 Oquaga	•	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Lackawanna	•	 Poor Bottom layer Thickest layer 	•	 Poor Bottom layer Thickest layer 	 0.00 0.00	
296348 Philo	 85 	 Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.01	
296349 Pope		 Poor Thickest layer Bottom layer	 0.00 0.00	•	 0.00 0.00	
296350 Pope	 90 	 Poor Thickest layer Bottom layer 	 0.00 0.00	•	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			 Sand source 	Sand source	
	map unit 		 Value 	 Rating class 	 Value 	
296351 Rexford, somewhat poorly drained		Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.04	
Rexford, poorly drained	•	Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.04	
296355 Sheffield	 100 	•	•	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	
296363 Dystrochrepts, very stony	85	Bottom layer	0.00	 Poor Bottom layer Thickest layer	10.00	
296369 Wayland	•	Bottom layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
296376 Wellsboro	 80 	·	0.00	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	
296379 Wellsboro	 85 	Bottom layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	
296385 Wyoming	 85 	 - Fair Thickest layer Bottom layer	0.00	 - Fair Thickest layer Bottom layer	 0.03 0.15	
296386 Wyoming	 85 	 Fair Thickest layer Bottom layer	 0.00 0.06	•	 0.03 0.15	
296387 Wyoming	 85 	 Fair Thickest layer Bottom layer	 0.00 0.06	•	 0.03 0.15	
296388 Wyoming	 85 	 - Fair Thickest layer Bottom layer	10.00	•	 0.03 0.15	
296389 Wyoming	 100 	 - Fair Thickest layer Bottom layer 	 0.00 0.06	•	 0.00 0.03	

Table 11.--Source of Gravel and Sand--Continued

		Gravel source 		Sand source		
	map		 Value 	 Rating class 	 Value 	
296390 Water	 100	 Not rated 	 	 Not rated 	 	
297185 Edgemere	l	Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.04	
Shohola		Bottom layer	0.00		 0.00 0.00	
297186 Edgemere	l	Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.04	
297188 Manlius	İ	Thickest layer	0.19	_	 0.00 0.00	
Arnot	İ	Thickest layer Bottom layer	0.00	_	 0.00 0.00	
Rock outcrop	1 15		 	 Not rated 		
297189 Manlius	İ	Thickest layer	0.19	 Poor Bottom layer Thickest layer	 0.00 0.00	
Arnot	İ	Thickest layer	0.00	·	 0.00 0.00	
Rock outcrop	1 15	 Not rated 	 	 Not rated 		
297190 Braceville	•	Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.01 0.08	
297191 Wyalusing	 85 	Thickest layer	0.00	 Poor Thickest layer Bottom layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
297192 Pope	 95 	Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.04	
297193 Paupack	 90 	•	0.00	 Fair Thickest layer Bottom layer	 0.00 0.02	
297196 Freetown	 94 	 Not rated 	 	 Not rated 	1 	

Table 11. -- Source of Gravel and Sand--Continued

	 Pct. of		.	Sand source		
	map unit 		 Value 	 Rating class 	 Value 	
297197 Manlius	•	•	0.19	 Poor Bottom layer Thickest layer	 0.00 0.00	
297198 Manlius	:	Thickest layer	0.19	 Poor Bottom layer Thickest layer	 0.00 0.00	
297201 Oquaga	•	_	0.00	 Poor Thickest layer Bottom layer	 0.00 0.00	
297203 Delaware	•	•	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
297204 Delaware	İ	•	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
297205 Delaware	•	•	0.00	 Poor Bottom layer Thickest layer	1 10.00	
297209 Philo	 85 	•	0.00	 Fair Bottom layer Thickest layer	 0.00 0.01	
297210 Barbour	•		10.00	•	 0.02 0.69	
297216 Wurtsboro	 92 	•	0.00	 Fair Bottom layer Thickest layer	 0.01 0.01	
297217 Wurtsboro	' 88 	 Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.00	
297227 Arnot	 88 	 Fair Thickest layer Bottom layer	10.00	 Poor Bottom layer Thickest layer	1 1 1 0.00 1 0.00	
297228 Arnot	•	 - Fair Thickest layer Bottom layer 	0.00 0.12	 - Poor Bottom layer Thickest layer 	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of	•	e	Sand source		
	map unit 		 Value 	 Rating class 	 Value 	
297229 Wyoming		· -	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
297230 Wyoming	•	 - Poor Bottom layer Thickest layer 	0.00	 - Poor Bottom layer Thickest layer 	 0.00 0.00	
297231 Wyoming	:	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
297236 Suncook	•	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.08 0.89	
297237 Mardin	:	 Poor Bottom layer Thickest layer	10.00	 - Poor Bottom layer Thickest layer	10.00	
297238 Mardin	•	 Poor Bottom layer Thickest layer		 Poor Bottom layer Thickest layer	 0.00 0.00	
297239 Mardin	 85 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00	
297240 Mardin		 Poor Bottom layer Thickest layer	•	 Poor Bottom layer Thickest layer	 0.00	
297241 Unadilla	 90 	 Poor Bottom layer Thickest layer	10.00	 Poor Bottom layer Thickest layer	10.00	
297242 Shohola		 Poor Bottom layer Thickest layer	10.00	Thickest layer	 0.00 0.00	
Edgemere	 29 	 Poor Bottom layer Thickest layer 	•	•	 0.02 0.04	
297243 Shohola	 62 	 Poor Bottom layer Thickest layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Edgemere		 Poor Bottom layer Thickest layer 	10.00	 Fair Thickest layer Bottom layer 	 0.02 0.04	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of		e 	Sand source		
	map unit 	•	 Value _	 Rating class 	 Value 	
297244 Lordstown	İ	•	10.00	 Fair Thickest layer Bottom layer	 0.01 0.02	
Swartswood	Ī	Bottom layer	0.00	 Fair Bottom layer Thickest layer	 0.01 0.01	
297247 Chenango	İ	Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.10	
297248 Chenango		Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.10	
297249 Chenango		Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.10	
297253 Craigsville	Ī	Bottom layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Wyoming		Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.13	
297254 Pits, shale	 40	 Not rated		 Not rated		
Pits, gravel	 40 	 Not rated 		 Not rated 		
298049 Wurtsboro, extremely stony			•	•	 0.05 0.05	
298050 Wurtsboro, extremely stony	 60 	 Poor Thickest layer Bottom layer	 0.00 0.00	•	 0.05 0.05	
Swartswood, extremely stony	 40 	 Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.05	
298051 Wurtsboro, extremely stony	 60 	 Poor Thickest layer Bottom layer 	 0.00 0.00	•	 0.05 0.05	

Table 11. -- Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 		 Value 	 Rating class 	 Value 	
298051 Swartswood, extremely stony		Bottom layer	 0.00	•	 0.00 0.05	
298075 Colonie	 80 	•	 0.00 0.00	•	 0.36 0.81	
298188 Lackawanna, extremely stony	 85 	Bottom layer	 0.00 0.00	•	 0.00 0.00	
298189 Lackawanna, extremely stony	' 85 	Bottom layer	•	 - Poor Bottom layer Thickest layer	 0.00 0.00	
298221 Swartswood, extremely stony	 90 	Bottom layer	 0.00 0.00	•	 0.00 0.05	
298222 Swartswood, extremely stony	 90 	Bottom layer	 0.00 0.00	·	 0.00 0.05	
298223 Swartswood, extremely stony	 85 	Bottom layer	 0.00 0.00	•	 0.00 0.05	
298255 Delaware, rarely flooded	 80 	 Poor Bottom layer Thickest layer 	 0.00 0.00	-	 0.00 0.00	
298256 Delaware, rarely flooded	 80 	 Poor Bottom layer Thickest layer 	 0.00 0.00	•	 0.00 0.00	
298257 Wallpack	 85 	 Poor Bottom layer Thickest layer 	 0.00 0.00	•	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 		 Value 	 Rating class 	 Value 	
298258 Wallpack		Bottom layer	0.00	•	 0.00 0.00	
298259 Wallpack, extremely stony			•	 Poor Bottom layer Thickest layer	10.00	
298260 Wallpack, extremely stony			0.00	 Poor Bottom layer Thickest layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
298261 Wallpack			 0.00 0.00	•	 0.00 0.00	
298262 Wallpack, extremely stony		 Poor Thickest layer Bottom layer	 0.00 0.00	•	1 1 1 0.00 1 0.00	
298265 Venango, extremely stony	•	 Poor Bottom layer Thickest layer	 0.00 0.00	•	10.00	
298266 Venango, extremely stony	 85 	 - Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.00	
298409 Swartswood, extremely stony	 90 	 Poor Bottom layer Thickest layer	 0.00 0.00	_	 0.00 0.05	
298411 Swartswood, extremely stony	 90 	 Poor Bottom layer Thickest layer	 0.00 0.00	·	 0.00 0.05	
298413 Swartswood, extremely stony	 85 	 - Poor Bottom layer Thickest layer	 0.00 0.00	·	 0.00 0.05	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 		 Value 	 Rating class 	 Value _	
318498	 	 	!		!	
Hazen, very stony		Thickest layer	0.00	Fair Thickest layer Bottom layer	10.26	
Hoosic, very stony	 35 	 Poor Thickest layer Bottom layer	0.00	 Fair Thickest layer Bottom layer 	 0.01 0.20	
318533 Hazen, very stony	l	Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.26 0.60	
Hoosic, very stony	 40	 Poor	 0.00	 Fair Thickest layer Bottom layer	 0.01 0.20	
319783 Catden	 85 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
319784 Fredon, very stony		Bottom layer	•	 Good Thickest layer 	 0.00	
Halsey, very stony	 40 		•	 Good Thickest layer 	 0.07 	
543222 Andover, extremely stony	:	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00	
Buchanan, extremely stony	į	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
543243 Berks	 65 	 Poor Thickest layer Bottom layer	 0.00 0.00	·	 0.00 0.00	
Weikert		 Fair Thickest layer Bottom layer	 0.00 0.31		 0.00 0.00	
543246 Buchanan	 75 	 Poor Bottom layer Thickest layer 	 0.00 0.00	•	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of		e	Sand source		
	map unit 	•	 Value 	 Rating class 	 Value 	
543247 Buchanan, extremely stony	80 	Bottom layer	•	 Poor Bottom layer Thickest layer	 0.00	
543257 Chippewa	:	•	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
543258 Chippewa		Bottom layer	•	 Poor Bottom layer Thickest layer	10.00	
543259 Chippewa, extremely stony	90	Bottom layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
543271 Delaware	 90 	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.02	
543276 Fluvaquents		 Poor Bottom layer Thickest layer	•	 Poor Bottom layer Thickest layer	 0.00 0.00	
543292 Hazleton, extremely stony	90	 - Poor Bottom layer Thickest layer	0.00	 - Poor Bottom layer Thickest layer	 0.00 0.00	
543293 Hazleton, extremely stony	90	 Poor Bottom layer Thickest layer 	 0.00 0.00	· -	 0.00 0.00	
543299 Laidig, extremely stony	 90 	 - Poor Bottom layer Thickest layer 	 0.00 0.00	•	 0.00 0.00	
543300 Laidig, extremely stony		 - Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.00	
543304 Laidig	 50 	 Poor Bottom layer Thickest layer 	0.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
·	map unit 	•	 Value 	 Rating class 	 Value _ _	
543304 Rubble land	 40 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
543318 Rubble land	•	 Poor Bottom layer Thickest layer 		 Poor Bottom layer Thickest layer	 0.00 0.00	
543327 Swartswood	 90 	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.01	
543328 Swartswood	 90 	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	· -	 0.00 0.01	
543330 Swartswood, extremely stony		 Poor Bottom layer Thickest layer	 0.00	· -	 0.00 0.01	
Wurtsboro, extremely stony	 30 	 - Poor Bottom layer Thickest layer 	•	 Poor Bottom layer Thickest layer 	 0.00 0.00	
543331 Swartswood, extremely stony	 50 	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.01	
Wurtsboro, extremely stony		 Poor Bottom layer Thickest layer	 0.00 0.00	· -	 0.00 0.00	
543359 Volusia	 85 	 - Poor Thickest layer Bottom layer 	 0.00 0.00	•	 0.00 0.00	
543360 Volusia, extremely stony	 85 	 Poor Thickest layer Bottom layer	 0.00 0.00	•	 0.00 0.00	
543374 Wurtsboro	 90 	 Poor Bottom layer Thickest layer	10.00	· -	10.00	
543375 Wurtsboro	 90 	 - Poor Bottom layer Thickest layer 	 0.00 0.00	•	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 	•	 Value 	 Rating class 	 Value 	
612280 Scio	 80 	Bottom layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
612666 Colonie	:	Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.36 0.81	
612668 Hoosic, very stony	l	Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.01 0.20	
Hazen, very stony		Thickest layer	0.00	Fair Thickest layer Bottom layer	 0.26 0.60	
612724 Lordstown, very rocky	I 50	 Fair	 	 Poor		
200.7	İ	Thickest layer	0.07	Bottom layer Thickest layer 	10.00 10.00	
Wallpack, very rocky	40 	Thickest layer	0.00	Poor Bottom layer Thickest layer	10.00	
612732 Atherton, very poorly drained	 	Bottom layer	0.00	 - Poor Bottom layer Thickest layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Atherton, poorly drained	 30 	Bottom layer	•	 Poor Bottom layer Thickest layer	 0.00 0.00	
612738 Fluvaquents, occasionally flooded	 90 	 Poor Bottom layer Thickest layer	 0.00	·	 0.00	
612753 Wallpack, aeolian mantle, very stony-	 85 	 Poor Thickest layer Bottom layer	 0.00 0.00	·	 0.00 0.00	
612756 Wallpack, aeolian mantle, very stony-	 85 	 - Poor Thickest layer Bottom layer 	 0.00 0.00	· -	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 	•	 Value 	 Rating class 	 Value 	
612757 Wallpack, aeolian mantle, very stony-	 85 85 	 	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Thickest layer	 0.00 0.00 0.00	
612767 Wellsboro, extremely stony	 85 	 - Poor Bottom layer Thickest layer	 0.00 0.00	·	 0.00 0.05	
612768 Wellsboro, extremely stony	 85 	 Poor Bottom layer Thickest layer	 0.00 0.00	·	 0.00 0.05	
613393 Alden, extremely stony	 90 	 Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.00	
613447 Unadilla	 85 	 Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.00	
613448 Unadilla	 85 	 Poor Bottom layer Thickest layer	 0.00 0.00	•	 0.00 0.00	
614075 Wurtsboro, extremely stony	I	 Poor Thickest layer Bottom layer	 0.00 0.00	•	 0.05 0.05	
Swartswood, extremely stony	 20 	 Poor Bottom layer Thickest layer	 0.00 0.00	· -	 0.00 0.05	
620179 Arnot, very rocky	 55 	 Fair Thickest layer Bottom layer	 0.00 0.62	·	 0.00 0.00	
Lordstown, very rocky	 40 	 Fair Thickest layer Bottom layer	 0.07 0.38	•	 0.00 0.00	
620180 Arnot	 45 	 - Fair Thickest layer Bottom layer 	 0.00 0.62	•	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of		9	 Sand source 	
	map unit 	 Rating class 	 Value 	Rating class	 Value
620180 Lordstown	İ	Thickest layer	10.07	 Poor Bottom layer Thickest layer	 0.00 0.00
Rock outcrop	 15	 Not rated		 Not rated	
620181 Arnot		Thickest layer	0.00 0.62	 Poor Bottom layer Thickest layer	 0.00 0.00
Lordstown	•	Thickest layer	0.07 0.38	 Poor Bottom layer Thickest layer	10.00
Rock outcrop	 15	 Not rated		 Not rated	
623089 Chippewa, extremely stony	80	Bottom layer	0.00	 Poor Bottom layer Thickest layer	 0.00
623109 Farmington	l		0.00	 Poor Bottom layer Thickest layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Rock outcrop	 40	 Not rated 		 Not rated 	
624811 Galway, very rocky		Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00
624813 Lackawanna, extremely stony		Bottom layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
624816 Lordstown, very rocky		 Fair Thickest layer Bottom layer	 0.07 0.38	·	 0.00
Wallpack, very rocky		 Poor Thickest layer Bottom layer	 0.00 0.00	·	 0.00 0.00
624822 Lordstown	 50 	 Fair Thickest layer Bottom layer	0.07	 Poor Bottom layer Thickest layer	 0.00 0.00
Wallpack	 35 	 Poor Bottom layer Thickest layer 		 Poor Bottom layer Thickest layer 	 0.00 0.00

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 		 Value 	 Rating class 	 Value 	
624823 Lordstown	:	 Fair Thickest layer Bottom layer	10.07	 Poor Bottom layer Thickest layer	 0.00 0.00	
Wallpack	 35 	Bottom layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
624824 Lordstown	•	 Fair Thickest layer Bottom layer	0.07 0.38	 Poor Bottom layer Thickest layer	 0.00 0.00	
Wallpack	 35 	 Poor Bottom layer Thickest layer 	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
624826 Manlius, very rocky-	 60 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	10.00	
Nassau, very rocky		 Poor Thickest layer Bottom layer	10.00	 Poor Bottom layer Thickest layer	10.00	
624827 Nassau, very rocky	 55 	 Poor Thickest layer Bottom layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Manlius, very rocky-		 Poor Thickest layer Bottom layer 	•	 Poor Bottom layer Thickest layer 	 0.00 0.00	
624828 Nassau, very rocky	 55 	 Poor Thickest layer Bottom layer	•	 Poor Bottom layer Thickest layer	 0.00 0.00	
Manlius, very rocky-	 44 	 Poor Thickest layer Bottom layer 	10.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	
624829 Nassau, very rocky	 55 	 Poor Thickest layer Bottom layer	10.00	· -	10.00	
Manlius, very rocky-	 44 	 Poor Thickest layer Bottom layer	10.00	•	10.00	
624832 Nassau	 50 	 Poor Thickest layer Bottom layer	10.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Rock outcrop	 45 	 Not rated 	 	 Not rated 	 	

Table 11.--Source of Gravel and Sand--Continued

and soil name	 Pct. of			 Sand source 		
	map unit 	 Rating class 	 Value 	 Rating class 	 Value 	
624841 Oquaga	l	Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Rock outcrop	 25 	 Not rated 	 	 Not rated 		
624845 Rock outcrop	 45 	' Not rated 	 	' Not rated 	 	
Farmington	l	Bottom layer	10.00	Thickest layer	 0.00 0.00	
Galway	İ	Thickest layer	 0.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	
624846 Rock outcrop	 40 	 Not rated 		 Not rated 	i 	
Arnot	İ	Thickest layer	0.00	 Poor Bottom layer Thickest layer	10.00	
Rubble land	20	 Not rated 	 	 Not rated 		
626816 Udifluvents, occasionally flooded	İ	Bottom layer	0.00	 Fair Bottom layer Thickest layer	 0.10 0.10	
635458 Oquaga, very rocky		Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Lackawanna, very rocky		Bottom layer	•		 0.00 0.00	
635459 Oquaga, very rocky	 50 	Thickest layer	 0.00 0.00	·	10.00	
Lackawanna, very	 35 	Bottom layer	 0.00 0.00	· -	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
740953 Delaware, rarely flooded	 80 	Bottom layer	 0.00 0.00	· -	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			Sand source		
	map unit 		 Value 	 Rating class 	 Value 	
740968 Nassau, very rocky	 55 		0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Manlius, very rocky-	 44 	 Poor Thickest layer Bottom layer 	0.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	
740969 Nassau, very rocky			0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Manlius, very rocky-		 Poor Thickest layer Bottom layer	•	 Poor Bottom layer Thickest layer	10.00	
740971 Oquaga, very rocky	 55 		0.00	 Poor Bottom layer Thickest layer	10.00	
Lackawanna, very rocky	 30 	 Poor Bottom layer Thickest layer	•	 Poor Bottom layer Thickest layer	10.00	
740972 Oquaga, very rocky	 50 		0.00	 Poor Bottom layer Thickest layer	10.00	
Lackawanna, very	•	 Poor Bottom layer Thickest layer	•	 Poor Bottom layer Thickest layer	 0.00 0.00	
740974 Oquaga	 60 	 Poor Thickest layer Bottom layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
Rock outcrop	I 25 	 Not rated 		 Not rated 		
740975 Rock outcrop	 40	 Not rated	 	 Not rated		
Arnot	•	 Fair Thickest layer Bottom layer	0.00	 Poor Bottom layer Thickest layer	10.00	
Rubble land	1 20 	 Not rated 	 	 Not rated 		
740987 Scio	 80 	 Poor Bottom layer Thickest layer 	0.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of		e	 Sand source 		
	map unit 		 Value 	 Rating class 	 Value 	
740988 Udifluvents, occasionally flooded	 90 	 Poor Bottom layer Thickest layer	0.00	 Fair Bottom layer Thickest layer	 0.10	
740991 Unadilla	 85 	 Poor Bottom layer Thickest layer	 0.00 0.00	·	 0.00 0.00	
740992 Unadilla	 85 	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	1 1 1 0 . 00 1 0 . 00	
740995 Wellsboro, extremely stony	 85 	 Poor Bottom layer Thickest layer	•	 Fair Thickest layer Bottom layer	 0.00 0.05	
740996 Wellsboro, extremely stony	 85 	 Poor Bottom layer Thickest layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.05	
741149 Lackawanna, extremely stony	 85 	 Poor Bottom layer Thickest layer	 0.00	•	 0.00	
741150 Lackawanna, extremely stony	 85 	 Poor Bottom layer Thickest layer	 0.00	·	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
801114 Oquaga	 75 	 Poor Thickest layer Bottom layer	10.00		10.00	
Rock outcrop	 15	 Not rated		 Not rated		
810906 Oquaga	 75 	 Poor Thickest layer Bottom layer	 0.00 0.00	·	 0.00 0.00	
Rock outcrop	1 15	 Not rated	!	 Not rated		
1147465 Alden, extremely stony	 90 	 Poor Bottom layer Thickest layer 	 0.00 0.00	·	 0.00 0.00	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of			 Sand source 		
	map unit 	 Rating class 	 Value 	 Rating class 	 Value 	
1147467 Arnot, very rocky		Thickest layer	10.00	•	 0.00 0.00	
Lordstown, very rocky	Ī	Thickest layer	0.07	·	 0.00 0.00	
1147468 Arnot	İ	Thickest layer	0.00	•	 0.00 0.00	
Lordstown	İ	Thickest layer	Thickest layer 0.07		 0.00 0.00	
Rock outcrop	1 15	 Not rated 	į	 Not rated 	į	
1147469 Arnot	İ	Thickest layer	0.00	•	 0.00 0.00	
Lordstown	İ	Thickest layer	10.07	Poor Bottom layer Thickest layer	 0.00 0.00	
Rock outcrop	 15	 Not rated 	!	 Not rated	!	
1147470 Atherton, very poorly drained		Bottom layer	0.00	·	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Atherton, poorly drained	İ	Bottom layer	0.00	·	10.00	
1147471 Catden	 85 	•	10.00	·	 0.00 0.00	
1147474 Chippewa, extremely stony		 - Poor Bottom layer Thickest layer	 0.00 0.00	·	 0.00 0.00	
1147475 Colonie	 80 	 Poor Bottom layer Thickest layer 	0.00	 Fair Thickest layer Bottom layer 	 0.36 0.81	

Table 11.--Source of Gravel and Sand--Continued

	 Pct. of	•	e	 Sand source 		
	map unit 	•	 Value _	 Rating class 	 Value _	
1147478 Delaware, rarely flooded	İ	 Poor Bottom layer Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00	
1147482 Fredon, very stony	l		 0.00 0.00	·	 0.00	
Halsey, very stony			•	 Good Thickest layer 	 0.07 	
1147485 Hazen, very stony		Thickest layer	10.00	 Fair Thickest layer Bottom layer	 0.26 0.60	
Hoosic, very stony			10.00	 Fair Thickest layer Bottom layer 	 0.01 0.20	
1147490 Hoosic, very stony	 60 		10.00	 Fair Thickest layer Bottom layer	 0.01 0.20	
Hazen, very stony	 30 		10.00	 Fair Thickest layer Bottom layer	 0.26 0.60	
1147491 Hoosic, very stony			0.00	 - Fair Thickest layer Bottom layer	 0.01 0.20	
Otisville, very stony	•	•	 0.00 0.00	·	 0.19	
1147492 Lackawanna, extremely stony	 85 	 - Poor Bottom layer Thickest layer	 0.00	•	 0.00	
1147500 Wurtsboro, extremely stony	 90 	 - Poor Thickest layer Bottom layer	 0.00 0.00	•	 0.05 0.05	
1147501 Wurtsboro, extremely stony	 60 	 - Poor Thickest layer Bottom layer 	•	 - Fair Bottom layer Thickest layer 	 0.05 0.05	

Table 11. -- Source of Gravel and Sand--Continued

	 Pct. of			 Sand source 		
	map unit 		 Value 	 Rating class 	 Value 	
1147501 Swartswood, extremely stony		Bottom layer	 0.00	·	 0.00 0.05	
1147502 Wurtsboro, extremely stony		Thickest layer	 0.00	·	 0.05 0.05	
Swartswood, extremely stony		Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.05	
1147527 Udorthents		Bottom layer	0.00	 - Fair Thickest layer Bottom layer 	 0.00 0.10	
Urban land	40	Not rated	İ	Not rated	İ	
1147532 Udorthents	:	Bottom layer	0.00	 Fair Thickest layer Bottom layer	 0.00 0.10	
1147533 Wurtsboro, extremely stony		Thickest layer	0.00	 - Fair Bottom layer Thickest layer	 0.05 0.05	
Swartswood, extremely stony		Bottom layer	10.00	·	 0.00 0.05	
1948749 Arnot	 90 	Thickest layer	0.00	 Poor Bottom layer Thickest layer	 0.00 0.00	
1948750 Arnot	 90 	_	 0.00 0.12	_	 0.00 0.00	
1948751 Arnot	 90 	•	10.00	 Poor Bottom layer Thickest layer 	 0.00 0.00	
1948774 Conotton	•	 Fair Thickest layer Bottom layer 	0.00 0.12	 Fair Thickest layer Bottom layer 	 0.00 0.13	

Table 11.--Source of Gravel and Sand--Continued

Map unit symbol and soil name	 Pct. of		e	 Sand source 		
	map unit 		 Value 	 Rating class 	 Value 	
1948775 Conotton	 95 	 Fair Thickest layer Bottom layer	 0.00 0.12		 0.00 0.13	
1948776 Conotton	 95 	 Fair Thickest layer Bottom layer	 0.00 0.12	·	 0.00 0.13	
1948777 Conotton	 95 	 Fair Thickest layer Bottom layer	 0.00 0.12		 0.00 0.13	
1948797 Manlius	 90 	 Fair Thickest layer Bottom layer	 0.16 0.31	·	 0.00 0.00	
1948802 Manlius	 90 	 Fair Thickest layer Bottom layer	 0.16 0.31		 0.00 0.00	
1948818 Manlius	 90 	 Fair Thickest layer Bottom layer	 0.16 0.31		 0.00 0.00	
1948832 Penargyl	 90 	 Fair Thickest layer Bottom layer	 0.00 0.38	·	 0.00 0.00	
1948846 Phelps	 90 	 Fair Thickest layer Bottom layer	 0.00 0.38	·	 0.00 0.58	
1948855 Udorthents, loamy	 95 	 Poor Thickest layer Bottom layer		 Poor Bottom layer Thickest layer	10.00	
1948989 Urban land	 65 	 Not rated 	i 	 Not rated 	; 	
Delaware	25 	Poor Bottom layer Thickest layer	0.00	Fair Thickest layer Bottom layer	 0.00 0.02	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table]

	Pct. Of map	reclamation material		Roadfill sourc	e	Topsoil source 		
	unit 	· 		Rating class and limiting features		Rating class and limiting features		
290836	 	 	 	I I	 	 	 	
Hoosic, very stony	50 	Low content of organic matter Too acid	 0.03 0.32 0.58	Cobbles	 0.00 0.97 	Rock fragments	 0.00 0.00 0.00	
Otisville, very	<u> </u>	 	i		i	! 	i	
	40 	Too sandy Droughty	 0.00 0.00 0.03	i	 0.00 	Too sandy	 0.00 0.00 0.00	
296265	i		i		i	 	i	
Alden	100 	Too acid	 0.97 0.99 0.99	i	 0.00 	Hard to reclaim (rock fragments)	 0.00 0.92 0.97	
296269	 	 				 		
Fluvents, (alluvial		I	I	1	I	l	I	
land)	70 	Low content of organic matter Too acid	 0.05 0.68 0.90	i I	 0.14 		 0.14 0.50 	
296271	 	 	;		<u> </u>	 		
Alvira	55	 Fair	i	Poor	i	Poor	i	
	 	Low content of organic matter Too acid	0.12 0.50	i	0.00 	Rock fragments	0.00 0.00 0.59	
Watson	35	 Fair	i	Fair	i	 Fair	i	
	 	Low content of organic matter Too acid	0.04 0.50	Shrink-swell	0.14 0.87 	Rock fragments	0.14 0.50 0.88	
296272	i	' 	i	İ	i	' 	i	
Bath	85 	Fair Low content of organic matter Too acid Droughty	 0.08 0.54 0.86	I I	 0.60 	(rock fragments) Rock fragments	 0.00 0.00 0.60	
296273	l I]]	i I	1		 	I I	
Bath	85 	 Fair Low content of organic matter Too acid	 0.08 0.54	İ	 0.60 	(rock fragments)	 0.00 0.00	
	I	Droughty	0.86	!	!	_	10.37	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc 	е	Topsoil source 		
	map unit 	· 		Rating class and limiting features		Rating class and limiting features		
296274 Bath	 85 85 	 Fair Low content of organic matter Too acid Droughty	0.08	Wetness	 0.50 0.60 	Hard to reclaim (rock fragments)	 0.00 0.00 	
296275 Bath	 90 	 Fair Low content of organic matter Too acid Droughty	 0.02 0.54 0.95	 	 0.60 	(rock fragments) Rock fragments	 0.00 0.00 0.60	
296276 Bath	 90 	 Fair Low content of organic matter Too acid Droughty	0.02	Slope 	 0.60 0.92 	(rock fragments) Rock fragments	 0.00 0.00	
296277 Benson	 55 	 Poor Depth to bedrock Droughty Low content of organic matter	•	Cobbles	•	•	 0.00 0.00 	
296278 Benson	 60 	 Poor Depth to bedrock Droughty Low content of organic matter	•	Cobbles		•	 0.00 0.00 0.00	
Rock outcrop	 20 	 Not rated 	 	 Not rated 	 	 Not rated 	 	
296279 Benson	 60 	Depth to bedrock	•	Slope	0.00		 0.00 0.00 0.00	
Rock outcrop	 25 	 Not rated 	 	 Not rated 	 	 Not rated 	 	
296280 Braceville	 90 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.54 0.90	 	 1 0.76 	Wetness	 0.12 0.76 0.80	
296281 Braceville	 90 	 Fair Low content of organic matter Too acid Droughty 	 0.12 0.54 0.90	 	 0.76 	Wetness	 0.12 0.76 0.80 	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct. of map	reclamation mate	rial	Roadfill sourc 	е	Topsoil source 	
	unit 			Rating class and limiting features 		Rating class and limiting features 	
296283 Buchanan	 90 1 	 Fair Low content of organic matter Too acid 	 0.08 0.50	İ	 0.76 	-	 0.00 0.08 0.59
296288 Chippewa	 48 	 Fair Droughty Low content of organic matter Too acid	 0.18 0.32 0.68	 	 0.00 	Rock fragments	 0.00 0.00 0.50
Norwich	48 	 Fair Low content of organic matter Droughty Too acid	0.32	 	 0.00 	Rock fragments	 0.00 0.00 0.50
296289 Chippewa	 47 	 Fair Droughty Low content of organic matter Too acid	 0.10 0.32 0.68	 	 0.00 	Rock fragments	 0.00 0.00 0.24
Norwich	 47 	 Fair Droughty Low content of organic matter Too acid	0.26 0.32	Cobbles	 	Rock fragments	 0.00 0.00 0.50
296295 Udorthents, cut and fill		 Not rated	 	 Not rated	 	 Not rated	
296297 Dekalb	İ	 Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Cobbles		Slope	 0.00 0.00 0.59
296298 Dekalb	 100 	 Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.54	Slope		Rock fragments	 0.00 0.00 0.59
296303 Hazleton	 100 	 Fair Low content of organic matter Too acid Cobbles	0.09 0.50 0.94	Slope Depth to bedrock	0.27	(rock fragments)	 0.00 0.00 0.00

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc	е	Topsoil source		
	map unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features 		 Rating class and limiting features 		
296304 Holly	 100 	Low content of organic matter	 0.50 0.97	İ	 0.00 	 Poor Wetness Rock fragments 	 0.00 0.97	
296311 Lackawanna	 40 	Low content of organic matter	0.12	Wetness	 0.00 0.62 	Rock fragments	 0.00 0.00 0.32	
Bath	 30 	Low content of organic matter Too acid	 0.08 0.54 0.95	Wetness	 0.00 0.60 	Hard to reclaim (rock fragments)	 10.00 0.00 10.00	
296312 Lackawanna	 80 	Low content of	 0.12 0.50	İ	 0.62 		 0.00 0.32 0.62	
296313 Lackawanna	 80 	Low content of organic matter	 0.12 0.50	İ	 0.62 		 0.00 0.32 0.37	
296315 Lackawanna	80 	•	 0.12 0.50	İ	 0.62 	Hard to reclaim (rock fragments)	 0.00 0.32 0.62	
296316 Lackawanna	 80 	Low content of organic matter	0.12	Slope	 0.62 0.92 	Slope	 0.00 0.00 0.32	
296317 Laidig	 100 	Low content of	 0.00 0.50	İ	 0.89 	•	 0.00 0.50 0.59	
296326 Lordstown	 85 	Stone content Droughty	 0.08 0.27 0.50	Stones		Depth to bedrock	 0.00 0.54 	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct.	reclamation mate	Source of reclamation material		:e	Topsoil sourc	Topsoil source 	
	map unit	Rating class and		-		•		
	! !	limiting features 	 	limiting features	! .!	limiting features 	 	
296327	 	 	 	 		 	 	
Lordstown	85	Fair	1	Poor	1	Poor	1	
	I	Stone content	10.08	•		=	10.00	
	!	Droughty	10.27		10.08	•	10.00	
	 	Low content of organic matter	0.50 	Slope 	0.92 	Depth to bedrock 	0.54 	
296328	 	 	 	 	1	 	 	
Lordstown	40	 Fair	i	Poor	i	Poor	i	
	I	Droughty	0.18	Depth to bedrock	10.00	Slope	10.00	
	I	Low content of	10.50	Slope	10.00	•	10.00	
	!	-			!	Depth to bedrock	0.54	
	!	Too acid	10.54	!	!	!	!	
0001202	1 25	l Boom	1	I Door	!	l Boom	!	
Oquaga	, J5	Droughty	10.00	Poor Depth to bedrock	•	Poor Rock fragments	10.00	
	i	Too acid	10.50	•	10.00	•	10.00	
	i	Low content of	0.50	•	0.96	•	•	
	İ	organic matter	İ			1	İ	
296329	i	l 	İ	 		 	i	
Mardin	85	Fair	•	Fair	•	Poor		
	!	Low content of	10.08	:	0.04	•	10.00	
	!	organic matter Droughty	1 0.28	 	!	,	10.04	
	i	Too acid	10.39		i	(rock fragments)	•	
296330]]	1	 		 	1	
Mardin	85	Fair	i	 Fair	i	Poor	i	
	I	Low content of	10.08	Wetness	0.04	Rock fragments	10.00	
	I	organic matter	•	I	1	•	0.04	
	!	Droughty	10.28	•	!	•	10.08	
	l I	Too acid 	0.39 	 		(rock fragments)	 	
296331		 	į	<u>.</u> .	į	İ	į	
Mardin	85		•	Fair	•	Poor	10.00	
	!	Droughty Too acid	0.20 0.32		0.04	•	0.00 0.04	
	<u> </u>	Low content of	10.52	•	i .		10.04	
	į	organic matter		į	į	(rock fragments)	•	
296332	 	 	 	 		 		
Mardin	87	Fair	1	Fair	1	Poor	1	
	I	·	10.20		0.04	•	10.00	
	!		10.32	_	10.92	_	10.00	
	 	Low content of organic matter	0.50 	 		Wetness 	0.04 	
296335	[1	_ 	1	 -	1	 	1	
Meckesville	1 100	ı Fair	i	 Fair	i	 Fair		
	i	Too acid	0.12	•	0.99		0.28	
	Ì	Low content of	0.18	İ	Ì	=	10.37	
	l I	organic matter	1	 	1	Too acid	0.59 	
296337			İ	İ		i	İ	
Meckesville	1 100			Fair		Poor	1	
	1	Too acid	0.12	•	10.92	•	10.00	
	!	Low content of organic matter	10.12	wetness	0.99 	=	0.28 0.59	
	:	i organic maccer	•	! 	-		10.59	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct. of map	reclamation mate	rial	Roadfill sou 	rce	Topsoil sourd 	ce
	unit 			Rating class an limiting feature		Rating class and limiting features	
296338 Morris	 80 	 Fair Low content of organic matter Too acid 	 0.08 0.54	İ	 0.00	Rock fragments	 0.00 0.00 0.50
296339 Morris	 75 	 Fair Low content of organic matter Too acid 	0.08	Stones	 0.00 0.96 	Rock fragments	 0.00 0.00 0.50
296340 Morris	 80 	 Fair Low content of organic matter Too acid 	 0.08 0.54	Stones	 0.00 0.96 		 0.00 0.00 0.50
296341 Freetown, mucky peat	 100 	 Fair Too acid 	 0.50	 Poor Wetness 	10.00	 Not rated 	
296342 Paupack, mucky peat (shallow)		 Fair Too acid	 0.50	 Poor Wetness	 0.00	 Not rated 	
296343 Oquaga	 50 	 Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Cobbles			 0.00 0.54 0.76
Lackawanna	 35 	 Low content of organic matter Too acid 	 0.02 0.50	İ	 0.62 	•	 0.00 0.32 0.62
296344 Oquaga	 55 	 Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Cobbles	•	-	 0.00 0.37 0.54
Lackawanna	30 	 Fair Low content of organic matter Too acid 	 0.02 0.50	İ	 0.62 	 Poor Rock fragments Hard to reclaim (rock fragments) Slope 	 0.00 0.32 0.37

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc	e	Topsoil sourc	e
	map unit 			Rating class and limiting features		 Rating class and limiting features 	
296346	 	 	 	 	 	 	
Oquaga	50 	Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Cobbles	•	•	 0.00 0.54 0.76
Lackawanna	 35 	 Fair Low content of organic matter Too acid	•	İ	 0.62 	•	 0.00 0.32 0.62
296347		 -	!			! !	
Oquaga	60 	Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Slope	•	Slope	 0.00 0.00 0.54
Lackawanna	30 	 Fair Low content of organic matter Too acid 	0.02	Slope	 0.62 0.92 	Slope	 0.00 0.00 0.32
296348 Philo	 85 	 Fair Too acid Water erosion 	 0.54 0.99 	•	 0.76 	Hard to reclaim (rock fragments)	 0.76 0.92 0.97
296349 Pope	 90 	 Fair Low content of organic matter Too acid Water erosion	 0.01 0.50	i I	 	 Fair Too acid 	 0.59
296350 Pope	 90 1 	 Fair Low content of organic matter Too acid Water erosion	 0.01 0.50 0.99	i I		 Fair Too acid 	 0.59
296351 Rexford, somewhat	 	 	 	 	 	 	
poorly drained	40 	Fair Low content of organic matter Droughty Too acid 	 0.02 0.44 0.54	i I	 0.00 		 0.00 0.00 0.12
Rexford, poorly drained	 35 	 Fair Low content of organic matter Droughty Too acid	 0.02 0.44 0.54	i I	 0.00 	•	 0.00 0.00 0.12

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	Pct.	reclamation mate	rial	Roadfill sourc	е	Topsoil sourc	e
	map unit 			Rating class and limiting features		 Rating class and limiting features 	
296355 Sheffield	•	Low content of organic matter Too acid	0.05	Low strength	 0.00 0.22	•	 0.00
296363 Dystrochrepts, very stony	85	 Fair Low content of organic matter Droughty	 0.08	 - - Poor Depth to bedrock Slope Cobbles	•	Hard to reclaim (rock fragments)	
296369 Wayland	 100 	Low content of organic matter	0.46	Low strength	 0.00 0.00	•	 0.00
296376 Wellsboro	 80 	Low content of organic matter	0.08	İ	 0.04 	Wetness	 0.00 0.04 0.82
296379 Wellsboro	•	Low content of organic matter	0.08	Slope	 0.04 0.92		 0.00 0.00 0.04
296385 Wyoming	 85 	Droughty Low content of organic matter	0.01 0.08	I I	 	 Poor Rock fragments Hard to reclaim (rock fragments) Too acid	 0.00 0.00 0.76
296386 Wyoming	 85 	Droughty Low content of organic matter	 0.01 0.08 0.50	 	 	 Poor Rock fragments Hard to reclaim (rock fragments) Too acid	 0.00 0.00 0.76
296387 Wyoming	 85 	Droughty Low content of	 0.01 0.08 0.50	 	 	 Poor Rock fragments Hard to reclaim (rock fragments) Slope	 0.00 0.00 0.37
296388 Wyoming	 85 	Droughty Low content of	 0.01 0.08 0.50	I I	 0.50 	Slope	 0.00 0.00 0.00

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	 Pct. of map	reclamation mate	rial	Roadfill sourc 	е	Topsoil sourc 	е
	map unit 			Rating class and limiting features 		Rating class and limiting features 	
296389 Wyoming	 100 100 	 Fair Droughty Low content of organic matter Too acid	 0.02 0.05 0.50	i I	 0.00 	Slope	 0.00 0.00 0.00
296390 Water	 100	 Not rated	 	 Not rated		 Not rated	
297185 Edgemere	 42 	 Fair Too acid Low content of organic matter Droughty	0.50 0.50	Stones	 0.00 0.68 	Hard to reclaim (rock fragments)	 0.00 0.24 0.28
Shohola	 42 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.59	I I	 0.00 	Hard to reclaim (rock fragments)	 0.00 0.24 0.28
297186 Edgemere	75 	 Fair Too acid Low content of organic matter Droughty	 10.50 0.50 10.90	Stones	 0.00 0.55 	Hard to reclaim (rock fragments)	 10.00 0.24 10.28
297188 Manlius	 40 	 Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Slope	•	Slope	 0.00 0.00 0.54
Arnot	 35 	 Poor Droughty Depth to bedrock Stone content	0.00	Slope	•	Depth to bedrock	 0.00 0.00 0.00
Rock outcrop	 15 	 Not rated 	 	 Not rated 		 Not rated 	
297189 Manlius		Droughty Too acid Low content of	0.00 0.50 0.50	Slope Cobbles 	•	Slope	 0.00 0.00 0.54
Arnot	 35 	Droughty Depth to bedrock	 0.00	Slope	0.00	Depth to bedrock	 0.00 0.00 0.00
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	 Pct. of map	reclamation mate	rial	 Roadfill sourc 	e	 Topsoil sourc 	е
				Rating class and limiting features		Rating class and limiting features	
297190 Braceville	•	 Fair Low content of organic matter Too acid	•	Ì	 0.29 		 0.29 0.98
297191 Wyalusing	 85 	 Fair Low content of organic matter Too acid Cobbles	0.08	Cobbles	 0.00 0.84 	Hard to reclaim (rock fragments)	
297192 Pope	 95 	 - Fair Low content of organic matter Too acid	 0.40 0.50	İ	 	 	 0.59
297193 Paupack	 90 	 Fair Too acid 	•	 Poor Wetness 	 0.00	 Not rated 	
297196 Freetown	 94 	 Fair Too acid	•	 Poor Wetness	 0.00	 Not rated 	
297197 Manlius	 90 	 Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Cobbles	•	Depth to bedrock	 0.00 0.54 0.76
297198 Manlius	 86 	 Poor Droughty Too acid Low content of organic matter	 0.00 0.50 0.50	Cobbles	•	•	 0.00 0.37 0.54
297201 Oquaga	 75 	 Poor Droughty Too acid Depth to bedrock	0.00 0.50	Slope	0.00	=	 0.00 0.00 0.71
297203 Delaware	93 	 Fair Low content of organic matter Too acid	 0.12 0.97	İ	 	 Good 	
297204 Delaware	 82 	 Fair Low content of organic matter Too acid 	 0.12 0.97	İ	 	 Good 	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	 Pct. of map	reclamation mate	rial	 Roadfill sourc 	e	 Topsoil sourc 	e
	map unit 	`		Rating class and limiting features		Rating class and limiting features 	
297205 Delaware	 80 	Low content of	 0.12 0.97	İ	 	 Fair Slope 	 0.04
297209 Philo	 85 	Low content of organic matter Too acid	 0.12 0.54 0.99	i I	 0.76 	(rock fragments) Wetness	 0.68 0.76 0.97
297210 Barbour	 85 	Low content of	 0.02 0.54 0.98	i I	! ! ! ! !	 - Fair Rock fragments Hard to reclaim (rock fragments) Too acid	 0.12 0.50 0.98
297216 Wurtsboro	 92 	 Fair Low content of organic matter Too acid 	 0.02 0.50	İ	 0.18 	Wetness	 0.03 0.18 0.50
297217 Wurtsboro	 88 	Low content of	 0.02 0.50	İ	 0.18 	 - Fair Rock fragments Wetness Slope 	 0.03 0.18 0.37
297227 Arnot	88 	 Poor Droughty Depth to bedrock Too acid	0.00	Cobbles	•	Depth to bedrock	 0.00 0.00 0.76
297228 Arnot	 85 		0.00	Slope	•	Depth to bedrock	 0.00 0.00 0.00
297229 Wyoming	90 	Low content of	 0.12 0.20 0.27	i I	 0.01 	 Poor Hard to reclaim (rock fragments) Rock fragments Too acid	 0.00 0.00 0.76
297230 Wyoming	 90 	 Fair Low content of organic matter Droughty Too acid	0.12 0.20 0.50	l I	 0.84 	(rock fragments) Rock fragments	 0.00 0.00 0.37

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct. of map	reclamation mate	rial	Roadfill sourc 	e	Topsoil sourc 	e
	unit	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
297231		 	 	 	 	 	
Wyoming 	90	Fair Low content of organic matter Cobbles Droughty	0.12	Slope 	 0.00 0.08 	(rock fragments)	 0.00 0.00 0.00
297236		 	 	 		 	
Suncook 	91	Poor Too sandy Wind erosion Low content of organic matter	 0.00 0.00 0.05	İ	 	Poor Too sandy Rock fragments 	 0.00 0.50
297237			i	 	i	! 	i
Mardin 	85	Fair Low content of organic matter Droughty Too acid	 0.08 0.24 0.39	 	 0.04 	Wetness	 0.00 0.04 0.08
297238		<u>.</u> .	į	<u>.</u>	į	! 	į
Mardin 	85	Fair Low content of organic matter Droughty Too acid	 0.08 0.24 0.39	 	 0.04 	Wetness	 0.00 0.04 0.08
297239		 	 	 		I 	
Mardin 	85	Fair Low content of organic matter Droughty Too acid	 0.08 0.24 0.39	Stones 	 0.04 0.83 	Wetness	 0.00 0.04 0.08
297240				! 		I 	i
Mardin 	85	Fair Low content of organic matter Droughty Too acid	 0.08 0.24 0.39	Stones 	 0.04 0.83 	Wetness	 0.00 0.04 0.08
297241	0.0		į		į		į
Unadilla 	90	Fair Water erosion Low content of organic matter Too acid	 0.06 0.50 0.54	 	 	Fair Too acid 	 0.98
297242			 	 	 	 	
Shohola 	62	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.59	 	 0.00 	Hard to reclaim (rock fragments)	 0.00 0.24 0.28
 Edgemere	29	 Fair		 Poor		 Poor	
 		Too acid Low content of organic matter	0.50 0.50		0.00 0.68	•	0.00

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct.	reclamation mate	rial	Roadfill sourc	e	Topsoil sourc	e
	map unit		IVal 110	Rating class and	I Va l 110	 Rating class and	IValue
	 	limiting features		limiting features		limiting features	
297243	 	 	 	 	1	 	
Shohola	62	•	I	Poor	•	Poor	1
	I	Low content of	0.12	Wetness	10.00	•	10.00
	!	organic matter	1	!	!		10.24
	 	Too acid Droughty	0.50 0.59	•	1	(rock fragments) Rock fragments	10.28
	i	Dioughey	1	i	i	l	1
Edgemere	29	 Fair	i	Poor	i	Poor	i
	I	Too acid	10.50	Wetness	0.00	Wetness	10.00
	I	Low content of	10.50	:	10.68	•	0.24
	!	organic matter	•	!	!	(rock fragments)	
	1	Droughty	10.90	1	!	Rock fragments	10.28
297244	! 	! 	i	! 	<u> </u>	! 	i
Lordstown	40	' Fair	i	Poor	i	' Poor	i
	ĺ	Droughty	0.19	Depth to bedrock	0.00	Rock fragments	0.00
	I	Low content of	10.50	I	I	Depth to bedrock	0.54
	I	organic matter	•	I	1	Too acid	10.98
	!	Too acid	0.54	!	!	<u> </u>	!
Swartswood	I I 35	 Fair	!	 Fair	:	 Poor	
Shar concoa	1	Low content of	10.12	•	10.89	•	0.00
	i	organic matter	i	1	İ		0.18
	ĺ	Too acid	10.50	İ	ĺ	(rock fragments)	Ì
	1	!	1	1		Too acid	10.59
207247			!		!	<u> </u>	!
297247 Chenango	l 186	 Pair	!	l Good	!	 Poor	!
Circuango	1	Low content of	10.50		i	•	10.00
	i	organic matter	1	i	i	(rock fragments)	
	I	Too acid	0.54	I	I	Rock fragments	10.00
		Droughty	10.57	1	1	Too acid	10.98
297248	!		!	!	!	<u> </u>	!
Chenango	I I 85	 Fair	!	 Good	:	 Poor	
Circuango	1 00	Low content of	10.50		i	•	10.00
	i	organic matter	İ	i	i	(rock fragments)	i
	ĺ	Too acid	0.54	İ	ĺ	Rock fragments	0.00
	1	Droughty	10.57	1		Slope	10.37
297249		 	1	1		 	1
Chenango	I I 90	l Fair	1	 Fair	 	 Poor	1
		Low content of	0.50		0.50		0.00
	i	organic matter	i	i	į.	(rock fragments)	
	I	Too acid	0.54	I	I	Slope	10.00
	!	Droughty	10.57	1	l .	Rock fragments	10.00
297253	 	 	!	 		l I	1
Craigsville	I 50	l Poor	i	Poor	i	 Poor	i
0_0_900		Cobbles	0.00		0.00	•	0.00
	I	Low content of	0.12		1	(rock fragments)	
	1	organic matter	1		l	•	10.00
	I	Too acid	10.50	1	1	Too acid	10.88
	I	!	I	 Good	I I	 Poor	I
Wyoming	1 ⊿∩			1 3004	1	1 - 00 -	1
Wyoming	40 				I .	Rock fragments	10.00
Wyoming	40 	Fair Low content of organic matter	0.12		 	•	0.00 0.00
Wyoming	40 	Low content of	0.12	l I	 	_	10.00

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc	e	Topsoil source 	
	unit 	`		Rating class and limiting features		Rating class and limiting features	
297254 Pits, shale	 40	 Not rated	 	 Not rated	 	 Not rated	
Pits, gravel	40	 Not rated		 Not rated	 	 Not rated	
298049 Wurtsboro, extremely stony	 90 	 Fair Low content of organic matter Too acid	 0.12 0.50	İ	 0.14 	 Fair Wetness Rock fragments Too acid	 0.14 0.76 0.76
298050	i	 	i	! 	i	İ	i
Wurtsboro, extremely stony	 60 	 Fair Low content of organic matter Too acid	 0.12 0.50	İ	 0.14 	 Fair Wetness Rock fragments Too acid	 0.14 0.76 0.76
Swartswood, extremely stony	 40 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.97	i I	 	 Poor Rock fragments Hard to reclaim (rock fragments) Too acid	 0.00 0.80 0.88
298051 Wurtsboro, extremely stony	 60 	 Fair Low content of organic matter Too acid	 0.12 0.50	İ	 0.14 	 Fair Wetness Slope Rock fragments 	 0.14 0.37 0.76
Swartswood, extremely stony	 40 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.97	i I	 	 Poor Rock fragments Slope Hard to reclaim (rock fragments)	 0.00 0.37 0.80
298075 Colonie	 80 	 Poor Too sandy Wind erosion Low content of organic matter	 0.00 0.00 0.08	İ	 	 Poor Too sandy Too acid 	 0.00 0.98
298188 Lackawanna, extremely stony	 85 	 - Fair Low content of organic matter Too acid Stone content	0.12	Stones	 0.00 0.78 	Rock fragments	 0.00 0.00 0.32

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc	e	Topsoil sourc 	e
	map unit 			Rating class and limiting features 		 Rating class and limiting features 	
298189 Lackawanna,	 	 	 	 	 	 	
extremely stony	85 	Fair Low content of organic matter Too acid Stone content	 0.12 0.50 0.65	i I	 0.78 	•	 0.00 0.32 0.37
298221 Swartswood,	 		 	 	 	 	
extremely stony	90 	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.97	i I		 Poor Rock fragments Hard to reclaim (rock fragments) Too acid	 0.00 0.80 0.88
298222 Swartswood,	' 		i	 	į	 	į
extremely stony	90 	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.97		 	Poor Rock fragments Slope Hard to reclaim (rock fragments)	 0.00 0.37 0.80
298223 Swartswood,	 		 	 	 	 	
extremely stony	85 	Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.97	i I	 0.00 	Rock fragments	 0.00 0.00 0.80
298255 Delaware, rarely	 		 	 	 	 	
flooded	80 	Fair Low content of organic matter Too acid	 0.03 0.54	i		Fair Too acid 	 0.98
298256 Delaware, rarely	 		 	 		 	
flooded	80 	Fair Low content of organic matter Too acid	 0.03 0.54	İ	 	Fair Too acid 	 0.98
298257 Wallpack	, 85	 Fair	i	 Good	į	 Poor	į
	 	Low content of organic matter Too acid Water erosion	0.02 0.54 0.90	 	 	•	0.00 0.00 0.37
298258 Wallpack	 85	 Fair	i i	 Fair	į i	 Poor	į
-	 	Low content of organic matter Too acid Water erosion	0.02 0.54 0.90	Slope 	0.50 	Slope	0.00 0.00 0.00

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	 Pct. of map	reclamation mate	rial	Roadfill source	e	 Topsoil sourc 	e
	map unit 	`		Rating class and limiting features 		Rating class and limiting features 	Value
298259 Wallpack, extremely stony		Low content of	 0.02 0.54	İ	 	 Fair Rock fragments 	 0.50
298260 Wallpack, extremely stony		Low content of organic matter	 0.02 0.54	İ	 	 - Fair Slope Rock fragments 	 0.37 0.50
298261 Wallpack	 85 	Low content of organic matter Too acid	 0.02 0.54 0.90	 	 	(rock fragments)	 0.00 0.00
298262 Wallpack, extremely stony		Low content of organic matter	 0.02 0.54	i -	 0.00	 Poor Slope Rock fragments 	 0.00 0.50 0.50
298265 Venango, extremely stony	 90 	Low content of organic matter Too acid	0.08	Low strength	 0.00 0.00	•	 0.00 0.49 0.50
298266 Venango, extremely stony	 85 	Low content of organic matter Too acid	0.08	Low strength	 0.00 0.00 	•	 0.00 0.37 0.49
298409 Swartswood, extremely stony	 90 1 	Low content of organic matter Too acid	 0.12 0.50 0.97	 	 	 Poor Rock fragments Hard to reclaim (rock fragments) Too acid	 0.00 0.80
298411 Swartswood, extremely stony	 90 	Low content of organic matter Too acid	 0.12 0.50 0.97	 	 	Slope	 0.00 0.37 0.80

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	Pct.	reclamation mate	rial	Roadfill sourc	:e	Topsoil sourc	e
	map unit		IValue	Rating class and	1721110	Rating class and	1721110
		limiting features		limiting features		limiting features	
298413	i	i I	i I	i I	i I	i I	İ
Swartswood,	I	I	I	I	1	I	1
extremely stony	85	Fair	1	Poor	1	Poor	1
	!	Low content of	10.12	Slope	10.00	•	10.00
	!	organic matter	10 50	!	!	Rock fragments	10.00
		Too acid Droughty	0.50 0.97	•		Hard to reclaim (rock fragments)	0.80
318498	 	 	1	 		 	
Hazen, very stony	60	Poor	1	Poor	•	Poor	1
	I	Stone content	10.00	•	10.00	•	10.00
	!	Too sandy	10.02		!	(rock fragments)	
	 	Low content of organic matter	0.03 	 		=	0.02 0.92
	I	l	I	I	1	I	1
Hoosic, very stony	35		•	Fair	•	Poor	
	!	Low content of	10.03	Cobbles	0.97		10.00
	!	organic matter Too acid	10.32	1	!	Hard to reclaim (rock fragments)	[0.00
	i	Droughty	10.52		İ	Too acid	0.88
318533	 	 		 		 	1
Hazen, very stony	50	Poor	1	Poor	1	Poor	1
	1	Stone content	10.00	•	10.00	•	10.00
	!	Too sandy	10.02	•	!	(rock fragments)	
	 	Low content of organic matter	0.03 	 		•	0.02 0.92
Hoosic, very stony	I I 40	 Fair	1	 Fair	1	 Poor	1
		Low content of	10.03	•	10.97		10.00
	i	organic matter	i	i	i	•	10.00
	I	Too acid	10.32	I	1	<pre>(rock fragments)</pre>	1
	 	Droughty 	0.58 	 	1	Too acid 	0.88
319783		!		!	į	!	į
Catden	85	•	•	Poor	•	Poor	1
	!	Too acid	10.50	Wetness	10.00		10.00
	i	! 	İ	İ	İ	organic matter	1
319784	 	 		 		 	
Fredon, very stony	50			Fair	•	Poor	1
	!	Too sandy		Wetness	10.02	Hard to reclaim	
	!	Low content of	10.03		!	(rock fragments)	
		organic matter Too acid	 0.74			•	0.00 0.02
Halsey, very stony	 40	 Poor	 	 Poor	1	 Poor	1
		Too sandy	0.00		0.00	•	0.00
	Ì	Low content of	0.12	İ	Ì	Too sandy	10.00
	I	organic matter	1	I	1	Hard to reclaim	10.00
	 	Too acid 	0.46 	 	1	(rock fragments)	1
543222	į	i I	į	İ	į	i I	į
Andover, extremely	 EF	 Paim	I I	 Door	1	 Boom	1
stony	1 33 I	Fair Low content of	 0.12	Poor Wetness	1	Poor Wetness	10.00
	i	organic matter			1		10.00
	:	_		i	i	=	
	1	Too acid	0.32	1	1	Hard to reclaim	0.68

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	 Pct. of map	reclamation mate	rial	 Roadfill sourc 	e	 Topsoil sourc 	e
	-	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features 		Rating class and limiting features 	
543222 Buchanan, extremely stony		 Fair Too acid Low content of organic matter 	 0.12 0.12	•	 0.29 	Hard to reclaim (rock fragments)	•
543243 Berks	 65 	•	 0.00 0.12 0.50	Slope		=	 0.00 0.00 0.79
Weikert	25 	 Poor Droughty Depth to bedrock Too acid	0.00	Slope	•	Depth to bedrock	 0.00 0.00 0.00
543246 Buchanan	 75 	 Fair Low content of organic matter Too acid 	 0.01 0.50	İ	 0.29 	•	 0.00 0.12
543247 Buchanan, extremely stony		 Fair Low content of organic matter Too acid 	 0.01 0.50	İ	 0.29 	•	 0.00 0.12
543257 Chippewa	 90 	 Fair Droughty Low content of organic matter Too acid	0.25 0.32	I I	 0.00 	•	•
543258 Chippewa	 90 	 Fair Droughty Low content of organic matter Too acid	 0.25 0.32 0.68	i I	 0.00 	•	•
543259 Chippewa, extremely stony		 Fair Droughty Low content of organic matter Too acid 	 0.10 0.32 0.68	i I	 0.00 	•	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	Pct.	reclamation mate	rial	Roadfill sourc	е	Topsoil sourc	е
	map unit		17721110	Rating class and	17721110	Rating class and	17721110
	 	limiting features		limiting features		limiting features	
543271	;—— !	 	i I	i I	i	 	i
Delaware	90	Fair	1	Good	I	Good	1
	I	Low content of	0.12	I	I	I	1
	!	organic matter	10.07	!	!	!	!
	1	Too acid	10.97	1	1	1	1
543276	i	 	i	i	<u> </u>	i I	i
Fluvaquents	85	Poor	i	Poor	i	Poor	i
_	I	Too clayey	10.00	Wetness	0.00	Wetness	10.00
	I	Too acid	0.61	I	I	•	10.00
	!		!	!	!	Rock fragments	10.88
543292	!]]	1	 	!	 	!
Hazleton, extremely	i	 	i	i	<u> </u>	i I	i
stony		Fair	i	 Fair	i	Poor	i
_	I	Too acid	0.12	Cobbles	0.39	Hard to reclaim	0.00
	I	Low content of	0.12	Depth to bedrock	0.92		
	!	organic matter	•	•	10.92	•	10.00
	1	Cobbles	10.96	1	1	Slope	10.00
543293	<u> </u>	 		! 	<u> </u>	! 	i
Hazleton, extremely	i	İ	i	i	i	i	i
stony	90	Fair	I	Poor	I	Poor	I
	1	Too acid	0.12	· -	10.00	· -	10.00
	!	Low content of	0.12	Cobbles	10.39		10.00
	!	organic matter	10.04	!	!	(rock fragments)	
	!	Cobbles 	0.94 	1		Rock fragments	10.00
543299	i		i	i i	i		i
Laidig, extremely	I	I	1	I	I	I	I
stony	90		•	Good	1	Poor	1
	!	Low content of	0.12	1	!	•	10.00
	!	organic matter Too acid	10.50	1	!	Hard to reclaim (rock fragments)	10.50
	i	Droughty	0.99		i	Too acid	0.59
	i	i	i	İ	i	İ	i
543300	I	l	1	I	I	l	I
Laidig, extremely	1		!	1.70	!	I Daniel	!
stony	1 90	Fair Low content of	 0.12	Fair Slope	I 0.92	Poor Rock fragments	10.00
	i	organic matter		biope	1	·	10.00
	i		0.50		i	Hard to reclaim	
	1	Droughty	0.99	I	I	(rock fragments)	1
540004	!		1	<u> </u>	1	!	!
543304 Laidig	1 50	 Paim	1	 Door	1	 Door	!
Lardig	1 50	Low content of	0.12	Poor Slope	10.00	Poor Slope	10.00
	i	organic matter	1		1	•	10.00
	İ	Too acid	10.50	İ	İ	=	10.50
	I	Droughty	10.99	I	I	<pre>(rock fragments)</pre>	I
Dubble land	1 40	137-44-4	1		!		!
Rubble land	1 410 	not rated		Not rated	<u> </u>	Not rated 	
543318	i		i	İ	i	I	i
Rubble land	75		1	Poor	•	Poor	I
	1	Stone content	[0.00	•	10.00	•	10.00
		Cobbles	10.00		10.00		10.00
	I I	Low content of organic matter	0.01 0.01	_	10.00	Hard to reclaim (rock fragments)	10.00
	i	Organic Maccer	I		i	_	10.00
	i		í	i	i		1

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

Map unit symbol and soil name	Pct.	reclamation mate	rial	Roadfill sourc	e	Topsoil source		
	map unit 	· — — — — — — — — — — — — — — — — — — —		 Rating class and limiting features 		Rating class and limiting features	Value 	
543327 Swartswood	 90 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.50	 	 0.99 	Hard to reclaim (rock fragments)	 0.00 0.18 0.59	
543328 Swartswood	 90 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.50	 	 0.99 		 0.00 0.18 0.37	
543330 Swartswood, extremely stony	 50 	 	 0.50 0.50 0.50	İ	 0.99 		 0.00 0.18 0.59	
Wurtsboro, extremely stony	 30 	 Fair Low content of organic matter Too acid 	 0.12 0.50	İ	 0.53 	•	 0.00 0.50 0.53	
543331 Swartswood, extremely stony	 50 	 Fair Too acid Droughty Low content of organic matter	 0.50 0.50 0.50	Wetness	 0.92 0.99 	Slope	 0.00 0.00 0.18	
Wurtsboro, extremely stony	30 	Low content of	0.12	Slope	 0.53 0.92 	Slope	 0.00 0.00 0.50	
543359 Volusia	85 		0.01	I I	 0.00 	Hard to reclaim (rock fragments)	 0.00 0.24 0.28	
543360 Volusia, extremely stony	 85 	 Fair Droughty Low content of organic matter Too acid	 0.03 0.08 0.68	 	 0.00 	Hard to reclaim (rock fragments)	 0.00 0.24 0.28	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct. of map	reclamation mate	rial	Roadfill sourc	e	Topsoil sourc 	e
	unit unit 			Rating class and limiting features		Rating class and limiting features	
543374 Wurtsboro	 90 	 Fair Low content of organic matter Too acid 	 0.12 0.50	İ	 0.53 	•	 0.00 0.50 0.53
543375	l I	 	1	 		 	1
Wurtsboro	90 	Low content of	 0.12 0.50 	İ	 0.53 	Slope	 0.00 0.37 0.50
612280 Scio	 80 	 Fair Low content of organic matter Water erosion Too acid	 0.08 0.37	i I	 0.32 	 Fair Wetness 	 0.32
612666 Colonie	 80 	 Poor Too sandy Wind erosion Low content of organic matter	i I	 	 	 Poor Too sandy Too acid 	 0.00 0.98
612668 Hoosic, very stony	 60 	 Fair Low content of organic matter Too acid Droughty	 0.03 0.32 0.58	i I	 0.97 	-	 0.00 0.00 0.37
Hazen, very stony	 30 	 Poor Stone content Too sandy Low content of organic matter	 0.00 0.02 0.03	İ	 0.00 	 Poor Hard to reclaim (rock fragments) Too sandy Slope	 10.00 10.02 10.37
612724 Lordstown, very rocky		Low content of organic matter Too acid	0.12 0.50 0.59	Slope 		_	 0.00 0.00 0.93
Wallpack, very rocky	40 	Low content of		I	 0.00 	 Poor Slope Rock fragments 	 0.00 0.50
612732 Atherton, very poorly drained	 60 	Too acid	0.88 0.99	 - Poor Wetness Low strength 	0.00 0.00		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc 	е	Topsoil sourc 	e
	unit 			Rating class and limiting features		Rating class and limiting features	
612732 Atherton, poorly drained	 30 	 	 0.50 0.68 0.97	Low strength	 0.00 0.00	 Poor Wetness 	
612738 Fluvaquents, occasionally flooded	 90 	 Fair Low content of organic matter Too acid Water erosion	 0.12 0.84 0.90	i I	 	 Poor Wetness 	 0.00
612753 Wallpack, aeolian mantle, very stony-	 85 	 Fair Low content of organic matter Too acid 	 0.03 0.50	İ	 	 	 0.37 0.76 0.97
612756 Wallpack, aeolian mantle, very stony-	 85 	 Fair Low content of organic matter Too acid 	 0.03 0.50	İ	 	 - Fair Rock fragments Hard to reclaim (rock fragments) Too acid	 0.76 0.97 0.98
612757 Wallpack, aeolian mantle, very stony-	 85 	 Fair Low content of organic matter Too acid 	 0.03 0.50	i -	 0.00 	Rock fragments	 0.00 0.76 0.97
612767 Wellsboro, extremely stony	 85 	 Fair Low content of organic matter Too acid Water erosion 	 0.02 0.50 0.99	Cobbles	 0.53 0.92 	•	 0.12 0.18 0.37
612768 Wellsboro, extremely stony	 85 	 Fair Low content of organic matter Too acid Water erosion 	0.02 0.50 0.99	Cobbles	 0.53 0.92 	•	 0.12 0.18 0.53

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc	e	Topsoil sourc	e
	map unit 			Rating class and limiting features 		Rating class and limiting features 	
613393 Alden, extremely	 	 	 	 	 	 	
stony	90 	Low content of organic matter Too acid	0.02	Low strength	 0.00 0.00 	•	 0.00 0.57
613447 Unadilla	•	Water erosion	 0.06 0.08	•		 Good 	
613448 Unadilla	 85 	Water erosion	 0.06 0.08	•		 Good 	
614075 Wurtsboro,	 	 	 	! 	 	 	
extremely stony	80 	Low content of	0.12	Wetness	 0.00 0.14 	•	 0.00 0.14 0.76
Swartswood, extremely stony	 20 	Low content of organic matter Too acid	 0.12 0.50 0.97	i I	 	Rock fragments	 0.00 0.00 0.80
620179 Arnot, very rocky	 55 	Droughty Depth to bedrock	0.00	į -	•	 Poor Depth to bedrock Rock fragments Too acid 	 0.00 0.00 0.88
Lordstown, very rocky	 40 	Low content of organic matter Too acid	 0.12 0.50 0.59	i I		 Poor Rock fragments Depth to bedrock Too acid 	 0.00 0.93 0.95
620180 Arnot	 45 45 	Droughty Depth to bedrock	10.00	Slope		_	 0.00 0.00 0.00
Lordstown	 40 	Low content of	0.12 0.50 0.59	Slope		_	 0.00 0.00 0.93

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation mate		Roadfill sourc 	е	Topsoil sourc 	е
	unit	Rating class and		Rating class and limiting features		=	
620180 Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	
620181 Arnot	 		0.00 0.00 0.12	·	•	•	0.00
Lordstown	25 	Low content of organic matter Too acid	0.12	Slope	•	=	 0.00 0.00 0.93
Rock outcrop	15	 Not rated	į	Not rated	į	 Not rated	į
623089 Chippewa, extremely stony	80 	Droughty Low content of organic matter	0.04	 	•	 Poor Wetness 	 0.00
623109 Farmington			0.00 0.00		•	 Poor Depth to bedrock 	 0.00
Rock outcrop	40	 Not rated		 Not rated	 	 Not rated	
624811 Galway, very rocky	 	Depth to bedrock	0.10 0.17 0.50	•	•	•	 0.00 0.04 0.10
624813 Lackawanna, extremely stony	 85 	Low content of organic matter Too acid	 0.12 0.50 0.65	i I	 0.78 		 0.00 0.32 0.98
624816 Lordstown, very rocky	 50 	Low content of organic matter Too acid	 0.12 0.50 0.59	- 	•	 - Poor Rock fragments Slope Depth to bedrock 	 0.00 0.37 0.93
Wallpack, very rocky	35 	Low content of	 0.02 0.54 	İ	 	 Fair Slope Rock fragments 	 0.37 0.50

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	 Pct. of map	reclamation material		Roadfill sourc 	e	 Topsoil sourc 	e
	unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
624822 Lordstown	 50 51 1	Low content of organic matter Too acid	0.12	Slope	•	· •	 0.00 0.00 0.93
Wallpack	 35 	Low content of organic matter Too acid	0.02	I I	 0.50 	·	 0.00 0.00
624823 Lordstown	 50 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.59	i I	•	 Poor Rock fragments Slope Depth to bedrock	 0.00 0.37 0.93
Wallpack	 35 	Low content of organic matter Too acid	 0.02 0.54 0.90	 	 	 Poor Hard to reclaim (rock fragments) Rock fragments Slope	 0.00 0.00 0.37
624824 Lordstown	 50 	Low content of	 0.12 0.50 0.59	- 	•	 Poor Rock fragments Depth to bedrock Too acid 	 0.00 0.93 0.95
Wallpack	 35 	Low content of organic matter Too acid	0.02	i I	 	 Poor Hard to reclaim (rock fragments) 	 0.00 0.00
624826 Manlius, very rocky-	 60 	Droughty Depth to bedrock	0.00	Slope	•	Rock fragments	 0.00 0.00 0.29
Nassau, very rocky	 25 	 Poor Droughty Depth to bedrock Low content of organic matter	10.00	Slope		Slope	 0.00 0.00 0.00
624827 Nassau, very rocky	55 	 Poor Droughty Depth to bedrock Cobbles 	10.00	Cobbles		=	 0.00 0.00

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. Of map	reclamation mate	rial	Roadfill sourc 	e	 Topsoil sourc 	e
	unit	Rating class and limiting features		•		· -	
624827 Manlius, very rocky-	 44 	Droughty Depth to bedrock	0.00	Cobbles	•		 0.00 0.46
624828 Nassau, very rocky	 55 	Droughty Depth to bedrock	0.00	Cobbles	•	·	 0.00 0.00 0.37
Manlius, very rocky-	 44 	Droughty Depth to bedrock	0.00	Cobbles	•	•	 0.00 0.37 0.46
624829 Nassau, very rocky	 55 	Droughty Depth to bedrock	0.00	Slope	•	Slope	 0.00 0.00 0.00
Manlius, very rocky-	 44 	Droughty Depth to bedrock	0.00	Cobbles	0.00	Rock fragments	 0.00 0.00 0.46
624832 Nassau	 50 	Droughty Depth to bedrock	0.00	Slope	•	Slope	 0.00 0.00 0.00
Rock outcrop	 45 	 Not rated 	! 	 Not rated 	 	 Not rated 	
624841 Oquaga	 60 	Droughty Depth to bedrock	0.00	Depth to bedrock Slope	0.00 0.00	· -	 0.00 0.00 0.16
Rock outcrop	25	 Not rated	 	 Not rated	 	 Not rated	!
624845 Rock outcrop	 45	 Not rated	! 	 Not rated 	 	 Not rated	
Farmington	35 	Droughty Depth to bedrock	0.00	Slope		 Poor Depth to bedrock Slope 	 0.00 0.00
Galway	20 	Depth to bedrock Droughty	0.10 0.17 0.50	Slope		_	 0.00 0.04 0.10

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation mate	rial	Roadfill sourc	е	Topsoil sourc	e
	map unit 			 Rating class and limiting features 		Rating class and limiting features 	
624846 Rock outcrop	 40	 Not rated	 	 Not rated	 	 Not rated	
ROCK OUTCIOP	40		i		i	 	i
Arnot	•	Droughty Depth to bedrock	0.00	Slope	•	Slope	 0.00 0.00 0.00
Rubble land	 20 	 Not rated 	 	Cobbles	 0.00 0.00 0.00	İ	
626816	İ	İ	i	İ	i	İ	i
Udifluvents, occasionally flooded	 90	 - Poor	 	 Good	 	 Fair	
1100000	 	Wind erosion Droughty	0.00 0.02 0.04	I I	 	Too sandy 	0.04
635458	! 	! 		! 	i	! 	
Oquaga, very rocky	55 	Droughty Depth to bedrock	0.00	Cobbles		_	 0.00 0.16 0.37
Lackawanna, very	 	 	;	! 		! 	
rocky		Low content of organic matter Too acid	•	 	 0.78 	•	 0.00 0.32 0.37
635459	i	i I	i	i	i	i İ	i
Oquaga, very rocky	50 	Droughty Depth to bedrock	0.00	Slope	•	Rock fragments	 0.00 0.00 0.16
Lackawanna, very	į	! 	į	İ	į	İ	į
rocky	35 	Low content of organic matter Too acid	0.12	Stones	 0.00 0.78 	Rock fragments	 0.00 0.00 0.32
740953] 	 	 	 	 	1
Delaware, rarely flooded	80 	Low content of	 0.03 0.54	İ	 	 Fair Too acid 	 0.98
740968	 	 	1	 	1	 	1
Nassau, very rocky	 55 	 Poor Droughty Depth to bedrock Cobbles	10.00	Cobbles	•	_	 0.00 0.00 0.37

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	 Pct. of map	reclamation mate	rial	Roadfill sourc 	е	Topsoil sourc 	e
	unit 			Rating class and limiting features		Rating class and limiting features	
740968 Manlius, very rocky-	 44 	Droughty Depth to bedrock	0.00	Cobbles		_	 0.00 0.37 0.46
740969 Nassau, very rocky	 55 	Droughty Depth to bedrock	0.00	Slope	•	Slope	 0.00 0.00 0.00
Manlius, very rocky-	 44 	Droughty Depth to bedrock	0.00	Cobbles		Rock fragments	 0.00 0.00 0.46
740971 Oquaga, very rocky	 55 	Droughty Depth to bedrock	0.00	Cobbles	•	_	 0.00 0.16 0.37
Lackawanna, very rocky	30 	Low content of organic matter Too acid	 0.12 0.50 0.65	 	 0.78 	•	 10.00 0.32 10.37
740972 Oquaga, very rocky	 50 	Droughty Depth to bedrock	0.00	Slope	•	Rock fragments	 0.00 0.00 0.16
Lackawanna, very rocky	 35 	organic matter Too acid	 0.12 0.50 0.65	Stones	 0.00 0.78 	Rock fragments	 0.00 0.00 0.32
740974 Oquaga	 60 	Droughty Depth to bedrock	0.00	Slope		Rock fragments	 0.00 0.00 0.16
Rock outcrop	 25	 Not rated 	 	 Not rated 	 	 Not rated 	
740975 Rock outcrop	 40	 Not rated 	' 	 Not rated 	 	 Not rated 	
Arnot	30 	Droughty Depth to bedrock	0.00	Slope	•	_	 0.00 0.00 0.00

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct. of map	reclamation mate	rial	Roadfill sourc	e	Topsoil sourc 	e
	unit	· 		Rating class and limiting features			
740975 Rubble land	 20 	 Not rated 	 	Cobbles	 0.00 0.00	İ	
740987		 	1			 	1
Scio	 80 	Low content of organic matter Water erosion	•	i I	 0.32 	 Fair Wetness 	 0.32
740988 Udifluvents, occasionally flooded		Wind erosion Droughty	 0.00 0.02 0.04	İ	 	 Fair Too sandy 	 0.04
740991 Unadilla	 85 	Water erosion	 0.06 0.08	•	 	 Good 	
740992 Unadilla	 85 	Water erosion	 0.06 0.08	•		 Good 	
740995 Wellsboro, extremely stony	 85 	Low content of organic matter Too acid	0.02	Cobbles	•	•	 0.12 0.18 0.53
740996 Wellsboro, extremely stony	 85 	Low content of organic matter Too acid	 0.02 0.50 0.99	Cobbles	 0.53 0.92 	•	
Lackawanna, extremely stony	85 1 	Low content of organic matter Too acid Stone content	 0.12 0.50 0.65	i I	 0.78 	 Poor Rock fragments Hard to reclaim (rock fragments) Slope 	 0.00 0.32 0.37

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	 Pct. of map	reclamation mate	rial	 Roadfill sourc 	e	 Topsoil sourc 	e
	map unit 			 Rating class and limiting features 		 Rating class and limiting features 	
741150 Lackawanna, extremely stony	 85 	Low content of organic matter Too acid	0.12	Stones	 0.00 0.78 	•	
801114 Oquaga	 75 	Droughty Depth to bedrock	0.00	Cobbles	•	Depth to bedrock	 0.00 0.16 0.76
Rock outcrop	1 15	 Not rated	į	Not rated	į	 Not rated	į
810906 Oquaga	 75 	Droughty Depth to bedrock	0.00	Cobbles	•	Depth to bedrock	 0.00 0.16 0.76
Rock outcrop	1 15	 Not rated	! !	 Not rated	!	 Not rated	!
1147465 Alden, extremely stony	 90 	Low content of organic matter Too acid	0.02	Low strength	 0.00 0.00	•	 0.00 0.57
1147467 Arnot, very rocky	 55 	Droughty Depth to bedrock	0.00	i -	•	Rock fragments	 0.00 0.00 0.88
Lordstown, very rocky	 40 	Low content of organic matter Too acid	 0.12 0.50 0.59	I I	•	 Poor Rock fragments Depth to bedrock Too acid 	 0.00 0.93 0.95
1147468 Arnot	 45 	Depth to bedrock	0.00	Slope	•	Slope	 0.00 0.00 0.00
Lordstown	 40 	Low content of organic matter Too acid	0.12	Slope		=	 0.00 0.00 0.93
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct. of map	reclamation mate	rial	Roadfill sourc	e	Topsoil sourc 	e
	-	·		Rating class and limiting features		Rating class and limiting features	
1147469 Arnot	 60	 - Poor	 	 Poor	 	 Poor	
Milot	:	Droughty Depth to bedrock	0.00 0.00 0.12	Depth to bedrock Slope		Depth to bedrock	0.00 0.00 0.00
Lordstown	 25 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.59	Slope	•	=	 0.00 0.00 0.93
Rock outcrop	1 15	 Not rated 		Not rated	-	 Not rated 	
1147470 Atherton, very poorly drained	 60 	 Fair Too acid Water erosion	 0.88 0.99	•	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•	10.00
Atherton, poorly drained	 30 	Low content of	 0.50 0.68 0.97	Low strength	 0.00 0.00		 0.00
1147471 Catden		 - Fair Too acid - 	 0.50 	 Poor Wetness 	 0.00 	 Poor Wetness High content of organic matter 	 0.00 0.00
1147474 Chippewa, extremely	i I I	 	i I	! !	i I	 	i i
stony	80 	Droughty Low content of	 0.04 0.08 0.50	i I	 0.00 	Poor Wetness 	 0.00
1147475 Colonie	 80 	Too sandy Wind erosion	 0.00 0.00 0.08	İ		 Poor Too sandy Too acid 	 0.00 0.98
1147478 Delaware, rarely flooded	 80 	 - Fair Low content of organic matter Too acid 	 0.03 0.54	İ	 	 Fair Too acid 	 0.98

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. Of map	reclamation mate	rial	Roadfill sourc	е	Topsoil sourc 	e
	unit 			Rating class and limiting features 		Rating class and limiting features	Value
1147482 Fredon, very stony	 50 	 Fair Too sandy Low content of organic matter Too acid	 0.02 0.03 0.74	i I	 0.02 	(rock fragments) Rock fragments	 0.00 0.00 0.02
Halsey, very stony	 40 	 Poor Too sandy Low content of organic matter Too acid	 0.00 0.12 0.46	i I	 0.00 	Too sandy	 0.00 0.00 0.00
1147485 Hazen, very stony	 60 	 Poor Stone content Too sandy Low content of organic matter	 0.00 0.02 0.03	i	 0.00 	(rock fragments) Too sandy	 0.00 0.02 0.92
Hoosic, very stony	 35 	 Fair Low content of organic matter Too acid Droughty 	 0.03 0.32 0.58	i I	 0.97 	Hard to reclaim (rock fragments)	 0.00 0.00 0.88
1147490 Hoosic, very stony	 60 	Low content of organic matter Too acid	 0.03 0.32 0.58	i I	 0.97 	Hard to reclaim (rock fragments)	 10.00 10.00 10.37
Hazen, very stony	 30 	Stone content	 0.00 0.02 0.03	İ	 0.00 	(rock fragments) Too sandy	 0.00 0.02 0.37
1147491 Hoosic, very stony	 50 	 Fair Low content of organic matter Too acid Droughty	 0.03 0.32 0.58	Cobbles	 0.00 0.97 	Rock fragments	 0.00 0.00 0.00
Otisville, very stony	 40 	 Poor Too sandy Droughty Low content of organic matter	 0.00 0.00 0.03	i	 0.00 	Too sandy	 0.00 0.00 0.00
1147492 Lackawanna, extremely stony	 85 	 - Fair Low content of organic matter Too acid Stone content	0.12 0.50 0.65	i I	 0.78 	•	 0.00 0.32 0.98

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct. of map	reclamation material		Roadfill sourc 	e	Topsoil sourc 	е
	unit unit 			Rating class and limiting features 		Rating class and limiting features 	
1147500 Wurtsboro, extremely stony	 90 	Low content of	 0.12	 Fair Wetness 	 0.14	 Fair Wetness 	 0.14
	 	Too acid 	0.50 	 			0.76 0.76
1147501 Wurtsboro,		 	<u> </u> 	 Fair	 	' Fair	
extremely stony	60 	Low content of	 0.12 0.50	Wetness	 0.14 	Wetness Rock fragments	0.14 0.76 0.76
Swartswood, extremely stony	40 	 Fair Low content of organic matter Too acid Droughty	 0.12 0.50 0.97	i I	 	•	 0.00 0.80 0.88
1147502 Wurtsboro,	 	 	 	 	 	 	
extremely stony	60 	Low content of	 0.12 0.50	İ	 0.14 	Slope	 0.14 0.37 0.76
Swartswood, extremely stony	40 	Low content of	 0.12 0.50 0.97	i I	 	Slope	 0.00 0.37 0.80
1147527 Udorthents		 Poor Too sandy Too acid Low content of organic matter	 0.00 0.68 0.88	Ì	 	 - Poor Too sandy 	 0.00
Urban land	 40 	 Not rated 	 	 Not rated 		 Not rated 	
1147532 Udorthents	100 	Too sandy	0.00 0.68	İ	 	 Poor Too sandy 	 0.00
1147533 Wurtsboro, extremely stony	 80	 Fair	 	 Poor	 	 Poor	
constant, somy	 	Low content of organic matter	0.12 0.50	Slope Wetness		Slope Wetness	0.00 0.14 0.76

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

and soil name	Pct.	reclamation mate	rial	Roadfill sourc	е	Topsoil sourc 	e
	map unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		 Rating class and limiting features 	
1147533 Swartswood, extremely stony	 20 	Low content of	0.12	 	 0.00	 Poor Slope Rock fragments	 0.00
	 	Too acid	0.50 0.97	i	 	•	0.80
1948749 Arnot	 90 	Droughty Depth to bedrock		i	•	Depth to bedrock	
1948750	 	Too acid 	0.50 	 	 	Too acid 	0.76
Arnot	90 	Droughty Depth to bedrock	 0.00 0.00 0.50	i	•	Poor Rock fragments Depth to bedrock Slope 	 0.00 0.00 0.37
1948751	i	' 	i	i	i	i I	i
Arnot	90 	Droughty Depth to bedrock	 0.00 0.00 0.50	Slope	•	•	 0.00 0.00 0.00
1948774	i	' 	i	i	i	' 	i
Conotton	90 	Too acid Low content of organic matter	 0.68 0.88 0.93	i I	 	Poor Rock fragments Hard to reclaim (rock fragments) 	 0.00 0.00
1948775	 	! 	! !	1 	<u> </u>	! 	<u> </u>
Conotton	95 	Too acid Low content of organic matter	 0.68 0.88 	i I	 	Poor Rock fragments Hard to reclaim (rock fragments) Slope	 0.00 0.00 0.37
1948776	İ	 	i	1	i	 	i
Conotton	95 	Low content of organic matter	 0.68 0.88 0.93	I I	 0.50 	Slope	 0.00 0.00 0.00
1948777	i	i I	i	i	i	i İ	i
Conotton	95 	Low content of organic matter	 0.68 0.88 0.93	- -	 0.00 	Slope	 0.00 0.00 0.00
1948797 Manlius	 90 	Droughty Too acid	 0.01 0.50 0.50	Cobbles	•	=	 0.00 0.71 0.76

Soil Survey of Delaware Water Gap National Recreation Area

Table 12.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

	Pct.	•		Roadfill sourc	e	Topsoil source	ce
and soil name	of		rial	I		I	
	map			!		!	
	unit	-		Rating class and		-	
	 	limiting features 		limiting features		limiting features	1
1948802	<u> </u>				<u> </u>		
Manlius	I I 00	l I⊽ai∞	!	 Poor	1	 Poor	1
Maniius	1 90	Droughty	10.01	1	•	1	10.00
	!	Droughty Too acid	10.50	•	10.00		10.37
	!	Low content of	10.50	•	10.97	Depth to bedrock	
	! 	organic matter	10.50	 		Depth to Dedrock	10.71
1948818	 	 	1	 	 	 	1
Manlius	I 90	Fair	i	 Poor	i	 Poor	i
	1	Droughty	0.01	•	•	•	10.00
	i	Too acid	10.50	•	10.50	•	10.00
	i	l Low content of	10.50	•	10.97	•	
	į	organic matter		!			İ
1948832	 	 	 	 	 	 	1
Penargyl	I 90	 Fair	i	 Good	i	 Fair	i
	İ	Low content of	0.12	İ	İ	Rock fragments	0.28
	İ	organic matter	İ	İ	İ	i	İ
	İ	Too acid	10.68	İ	İ	İ	İ
1948846	 	 		 		 	
Phelps	90	Fair	1	Fair	1	Poor	1
	I	Low content of	0.12	Wetness	0.32	Hard to reclaim	10.00
	I	organic matter	1	I	1	<pre>(rock fragments)</pre>	1
	I	Droughty	0.98	I	1	Wetness	10.32
	l	Water erosion	0.99	1	1	Rock fragments	10.90
1948855	! 	I 		 		! 	
Udorthents, loamy	95	Fair	1	Fair	1	Fair	1
	I	Too acid	10.88	Wetness	0.29	Wetness	10.29
	 	Water erosion	0.99			Rock fragments	10.97
1948989		 				 	i
Urban land	65 	Not rated	1	Not rated	1	Not rated	1
Delaware	25	•	•	Good	i	 Good	i
	I	Low content of	0.12	I	1	I	1
	I	organic matter	1	I	1	I	1
	 	Too acid	0.97	 		 -	1
	ı	ı	1	I .	1	ı	1

Table 13.--Ponds and Embankments

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

and soil name	Pct. Of map	l	reas	Embankments, dikes levees	, and	_	s
						Rating class and limiting features 	
290836 Hoosic, very stony	 50 	Seepage	 1.00 1.00	Seepage		 Very limited Depth to water 	 1.00
Otisville, very stony	 40 	Seepage	 1.00 1.00	Seepage	 1.00 	 Very limited Depth to water 	 1.00
296265 Alden	 100 	•	 0.04 	Ponding Depth to saturated zone	1.00 1.00	excavation walls Slow refill	 1.00 0.28
296269 Fluvents, (alluvial land)			 1.00 	Depth to saturated zone	11.00	excavation walls	 1.00
296271 Alvira	 55 	•		Depth to saturated zone	11.00	i	 1.00
Watson	 35 	Seepage		Depth to saturated zone	11.00	i	 1.00
296272 Bath	 85 	Seepage	 0.72 0.68	Depth to	 0.99 	 	 1.00
296273 Bath	 85 	 Very limited Slope Seepage	 1.00 0.72	Depth to	 0.99 	 Very limited Depth to water 	 1.00
296274 Bath	85 	 Very limited Slope Seepage	 1.00 0.72		 0.99 	 Very limited Depth to water 	 1.00
296275 Bath	 90 	 Somewhat limited Seepage Slope	 0.72 0.68	· =	 0.99 	 - Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

	 Pct. of map	l	reas	 Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	unit unit 	1 		Rating class and limiting features 		Rating class and limiting features 	
296276 Bath	 90 	Slope		Depth to	 0.99	 Very limited Depth to water 	 1.00
296277 Benson	 55 	Depth to bedrock	•	Piping	 1.00 1.00 0.02	į	 1.00
296278 Benson	 60 	•	11.00	Piping	 1.00 1.00 0.02	İ	 1.00
Rock outcrop	 20	 Not rated 		 Not rated 	 	 Not rated 	
296279 Benson	 60 	•	11.00	Piping	 1.00 1.00 0.02	į	 1.00
Rock outcrop	25	 Not rated	 	 Not rated	 	 Not rated	
296280 Braceville	 90 	•		 Somewhat limited Depth to saturated zone	 0.95	 Very limited Depth to water 	 1.00
296281 Braceville	 90 	Seepage		· •	 0.95	 Very limited Depth to water 	 1.00
296283 Buchanan	 90 	Seepage	0.72	 Somewhat limited Depth to saturated zone 	0.95 	 Very limited Unstable excavation walls Slow refill Depth to saturated zone	 1.00 1.00 0.02
296288 Chippewa	 48 	 Not limited 	 	saturated zone	 1.00 1.00	i -	 1.00
Norwich	 48 	 Not limited 	 	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to water 	 1.00
296289 Chippewa	 47 		 0.08 	 Very limited Depth to saturated zone 		 - Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	Pct.	l	reas	Embankments, dikes levees	, and	=	ls
	map unit 			 Rating class and limiting features 		•	
296289 Norwich	 47 	•		•		 - Very limited Depth to water 	 1.00
296295 Udorthents, cut and fill		 Not rated	 	 	 	 Not rated	
296297 Dekalb	 100 	Seepage	1.00 1.00	Large stones	 0.81 0.03	•	 1.00
296298 Dekalb	 100 	Seepage	1.00 1.00	Thin layer Large stones	 0.81 0.03	•	 1.00
296303 Hazleton	 100 	Seepage		Large stones		 Very limited Depth to water 	1 1.00
296304 Holly	 100 	-		Depth to saturated zone	1.00	•	 1.00
296311 Lackawanna	 40 	Slope		Depth to		 Very limited Depth to water 	 1.00
Bath	 30 	Slope		-		 Very limited Depth to water 	 1.00
296312 Lackawanna	 80 		 0.72 0.68	•	 0.99	 Very limited Depth to water 	 1.00
296313 Lackawanna	 80 	Very limited Slope Seepage		 Somewhat limited Depth to saturated zone	 0.99	 Very limited Depth to water 	 1.00
296315 Lackawanna	 80 	Somewhat limited Seepage Slope	 0.72 0.68	•	 0.99	 Very limited Depth to water 	 1.00
296316 Lackawanna	 80 	 Very limited Slope Seepage	 1.00 0.72	•	 0.99	 Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

Map unit symbol and soil name	Pct. of map	i I	reas	Embankments, dikes levees	, and	=	ls
	map unit 			Rating class and limiting features		Rating class and limiting features 	
296317 Laidig	 100 	 Very limited Seepage Slope		_		 Very limited Depth to water 	 1.00
296326 Lordstown	 85 	Depth to bedrock Seepage		Thin layer	 1.00 0.86 0.10	i -	 1.00
296327 Lordstown	 85 	 Very limited Slope Depth to bedrock Seepage	1.00	Piping Thin layer	 1.00 0.86 0.10	i -	 1.00
296328 Lordstown	 40 	 Very limited Slope Depth to bedrock Seepage	1.00	Thin layer	 1.00 0.86	•	 1.00
Oquaga	 35 	 Very limited Slope Depth to bedrock Seepage	11.00	Thin layer	 0.86 	 Very limited Depth to water 	 1.00
296329 Mardin	 85 	 Somewhat limited Seepage Slope		Depth to		 Very limited Depth to water 	 1.00
296330 Mardin	 85 	 Very limited Slope Seepage		Depth to	1 1.00	 Very limited Depth to water 	 1.00
296331 Mardin	 85 	 Somewhat limited Seepage Slope		Depth to		 Very limited Depth to water 	 1.00
296332 Mardin	 87 	 Very limited Slope Seepage 	 1.00 0.72	——————————————————————————————————————	 1.00 	 - Very limited Depth to water 	 1.00
296335 Meckesville	100 1 	 Very limited Slope Seepage 	 1.00 0.72 		 1.00 0.65 		 0.28 0.15 0.10

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. of map	İ	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond:	s
	unit 			Rating class and limiting features 		Rating class and limiting features	
296337 Meckesville	 100 101 	Slope	 1.00 1.00 0.72 		 1.00 1.00 0.65 	Depth to saturated zone	 0.28 0.15 0.10
296338 Morris	 80 	•	 0.68 	 Very limited Depth to saturated zone	 1.00	 - Very limited Depth to water -	 1.00
296339 Morris	 75 		 0.08 	 Very limited Depth to saturated zone	 1.00	 - Very limited Depth to water -	 1.00
296340 Morris	 80 	• •	 1.00 	 Very limited Depth to saturated zone	 1.00 	 Very limited Depth to water 	 1.00
296341 Freetown, mucky peat	 100 	_	 1.00	 Not rated 	 	 Somewhat limited Unstable excavation walls	 0.10
296342 Paupack, mucky peat (shallow)		•	 1.00 	Depth to	 1.00 1.00 1.00	excavation walls	 0.50
296343 Oquaga	50 		•	i -	 0.86 	 Very limited Depth to water 	 1.00
Lackawanna	 35 	Seepage	 0.72 0.68	· =	 0.99 	 Very limited Depth to water 	 1.00
296344 Oquaga	55 	Depth to bedrock	11.00	i	 0.86 	 Very limited Depth to water 	 1.00
Lackawanna	1 30 	Slope	 1.00 0.72	•	 0.99 	 Very limited Depth to water 	 1.00
296346 Oquaga	 50 			I -	 0.86 	 - Very limited Depth to water - - 	 1.00

Table 13.--Ponds and Embankments--Continued

	Pct. of map	l	reas	Embankments, dikes levees	, and	_		
	unit unit 	· 		Rating class and limiting features 		Rating class and limiting features 		
296346 Lackawanna	 35 	Seepage		•	 0.99	 Very limited Depth to water 	 1.00	
296347 Oquaga	 60 	Slope Depth to bedrock Seepage	1.00 0.86 0.72	Thin layer 	 0.86 	 Very limited Depth to water 	 1.00 	
Lackawanna	 30 	Very limited Slope		•	 0.99 	 Very limited Depth to water 	 1.00	
296348 Philo	 85 	•	 1.00 	Depth to	 1.00 0.95 	excavation walls	 1.00 1.00 0.02	
296349 Pope	 90 	•	 1.00	 Not limited 	 	 Very limited Depth to water	 1.00	
296350 Pope	 90 	·	 1.00	 Not limited 	 	 Very limited Depth to water	1 1 1 1 1 1 1 1 1 1	
296351 Rexford, somewhat poorly drained	 40 	_	 1.00	 - Very limited Depth to saturated zone	 1.00	 Very limited Depth to water 	 1.00	
Rexford, poorly drained	 35 	· -	•	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to water 	 1.00	
296355 Sheffield	 100 		 0.04 	Depth to	 1.00 1.00 0.80	Unstable excavation walls	 0.28 0.10 	
296363 Dystrochrepts, very stony		Seepage	1.00 1.00	i -	 0.46 	 - Very limited Depth to water - 	 1.00 	
296369 Wayland	 100 	Not limited 	 	 Very limited Ponding Depth to saturated zone Piping	 1.00 1.00 1.00	excavation walls Slow refill	 1.00 0.46	

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. of	l	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	is
	map unit 			 Rating class and limiting features 		 Rating class and limiting features 	
296376 Wellsboro	 80 	Seepage	 0.72 0.68	· •	 1.00	 Very limited Depth to water 	 1.00
296379 Wellsboro	 85 	Slope	 1.00 0.72	· •	 1.00	 Very limited Depth to water 	 1.00
296385 Wyoming	 85 		 1.00	 Very limited Seepage 	 1.00	 Very limited Depth to water 	 1.00
296386 Wyoming	 85 	Seepage	 1.00 0.68	• • •	 1.00	 Very limited Depth to water	
296387 Wyoming	 85 	Seepage	 1.00 1.00		 1.00	 Very limited Depth to water 	 1.00
296388 Wyoming	 85 	Seepage	 1.00 1.00	• • •	 1.00	 Very limited Depth to water 	 1.00
296389 Wyoming	 100 	Seepage	 1.00 1.00		 1.00	 Very limited Depth to water 	 1.00
296390 Water	 100	 Not rated 	 	 Not rated 	 	 Not rated 	
297185 Edgemere	 42 	Seepage	 0.72 0.68	•	 1.00 1.00	•	 1.00
Shohola	 42 	_			 1.00 	 Very limited Depth to water 	 1.00
297186 Edgemere	 75 		 0.72 	Depth to	 1.00 1.00	•	 1.00
297188 Manlius	 40 	Slope Depth to bedrock	11.00	Seepage	 0.86 0.07	· •	 1.00

Table 13.--Ponds and Embankments--Continued

Map unit symbol and soil name	Pct.	i i		Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	map unit 			Rating class and limiting features		Rating class and limiting features	
297188 Arnot	 35 	 Very limited Slope Depth to bedrock	11.00		 1.00 0.10	•	 1.00
Rock outcrop	 15	 Not rated 		 Not rated 		 Not rated	
297189 Manlius	 40 	Slope Depth to bedrock	11.00	Seepage	 0.86 0.07	•	 1.00
Arnot	35 	 Very limited Slope Depth to bedrock	11.00	•	 1.00 0.10	•	 1.00
Rock outcrop	1 15	 Not rated 		 Not rated 	 	 Not rated 	
297190 Braceville	 82 	 Very limited Seepage 	 1.00	 Very limited Depth to saturated zone	 1.00	 Very limited Depth to water 	 1.00
297191 Wyalusing	 85 	 Very limited Seepage 	 1.00 	saturated zone	 1.00 0.13	excavation walls	 1.00
297192 Pope	 95 	 Very limited Seepage 	 1.00	 Not limited 	 	 Very limited Depth to water 	 1.00
297193 Paupack	 90 	 Very limited Seepage 	 1.00 	Depth to saturated zone	 1.00 1.00 1.00	excavation walls	 0.50 -
297196 Freetown	 94 	 Very limited Seepage 	 1.00	 Not rated 	 	 Somewhat limited Unstable excavation walls	 0.10
297197 Manlius	 90 	Depth to bedrock	•	Seepage	 0.86 0.07 	· =	 1.00
297198 Manlius	86 	 Very limited Slope Depth to bedrock Seepage	1.00 0.86 0.72	Seepage	 0.86 0.07 	· =	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of map	i I	reas	Embankments, dikes levees	, and	Aquifer-fed excavated ponds		
	map unit 			Rating class and limiting features 		Rating class and limiting features 		
297201 Oquaga	 75 	Slope Depth to bedrock	11.00	Large stones	 0.81 0.02	· •	 1.00 	
297203 Delaware	 93 		1 1 1 1 1 1 1 1 1 1	 Not limited 	 	 Very limited Depth to water	1 1.00	
297204 Delaware	 82 	Seepage	 1.00 0.68	•	 	 Very limited Depth to water 	 1.00	
297205 Delaware	 80 	Seepage	 1.00 1.00	•	 	 Very limited Depth to water 	 1.00	
297209 Philo	 85 	-	 1.00 		 1.00 0.95 	excavation walls	0.02	
297210 Barbour	 85 	· •	 1.00 	 Not limited 	 	 Very limited Unstable excavation walls Depth to saturated zone	 1.00 0.96	
297216 Wurtsboro	 92 	Seepage	 0.72 0.08	· •	 1.00	 Very limited Depth to water 	1 1.00	
297217 Wurtsboro	 88 	Slope		· -	 1.00	 Very limited Depth to water 	 1.00	
297227 Arnot	 88 	Depth to bedrock		-	 1.00	 Very limited Depth to water 	 1.00	
297228 Arnot	 85 	_	11.00	· -	 1.00	 Very limited Depth to water 	 1.00	
297229 Wyoming	 90 	Seepage		Large stones	 1.00 0.26	•	 1.00	

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. of map	l	reas	Embankments, dikes levees	, and	-	is
	map unit 	· 		 Rating class and limiting features 		 Rating class and limiting features 	
297230 Wyoming	 90 	 Very limited Seepage Slope	 1.00 1.00		 1.00	 Very limited Depth to water 	 1.00
297231 Wyoming	 90 	 Very limited Seepage Slope	 1.00 1.00		 1.00 0.53	•	 1.00
297236 Suncook	 91 	 Very limited Seepage 	 1.00	 Very limited Seepage 	 1.00	 Very limited Depth to water 	 1.00
297237 Mardin	 85 	•	 0.72 0.08	· =	 1.00 	 Very limited Depth to water 	 1.00
297238 Mardin	 85 		 1.00 0.72	· •	 1.00 	 - Very limited Depth to water 	 1.00
297239 Mardin	 85 	 Somewhat limited Seepage Slope		•	 1.00	 Very limited Depth to water 	 1.00
297240 Mardin	 85 	 Very limited Slope Seepage		· •	 1.00	 Very limited Depth to water 	 1.00
297241 Unadilla	 90 			 Very limited Piping 	 1.00	 Very limited Depth to water 	 1.00
297242 Shohola	 62 			· -	•	 Very limited Depth to water	 1.00
Edgemere	 29 	 Somewhat limited Seepage Slope 		-	 1.00 1.00	•	 1.00
297243 Shohola	 62 	 Very limited Slope Seepage	 1.00 0.72	•	 1.00	 Very limited Depth to water 	 1.00
Edgemere	 29 	 Very limited Slope Seepage 	 1.00 0.72	Depth to	 1.00 1.00	·	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of map	i I	reas	Embankments, dikes levees		Aquifer-fed excavated pond	ls
	map unit 	· 		 Rating class and limiting features 		Rating class and limiting features 	
297244 Lordstown	 40 	Depth to bedrock Seepage		Piping Thin layer	 1.00 0.86	· •	 1.00
Swartswood	 35 	Seepage	 0.72 0.08	•	 0.86 	 Very limited Depth to water 	 1.00
297247 Chenango	 86 	Seepage	 1.00 0.08	Seepage	 1.00	 Very limited Depth to water 	 1.00
297248 Chenango	 85 	Seepage	 1.00 1.00		 1.00	 Very limited Depth to water 	 1.00
297249 Chenango	 90 	Seepage	 1.00 1.00		 1.00	 Very limited Depth to water 	 1.00
297253 Craigsville	 50 	-	 1.00		 1.00 0.99	· •	 1.00
Wyoming	 40 	Seepage	 1.00 0.08		 1.00 	 Very limited Depth to water 	 1.00
297254 Pits, shale	 40 	Depth to bedrock	•		 	 Not rated 	
Pits, gravel	 40 	 Not rated 	 	 Not rated 	 	 Not rated 	
298049 Wurtsboro, extremely stony	 90 	_	 1.00 0.08		 1.00	 Very limited Depth to water 	 1.00
298050 Wurtsboro, extremely stony	 60 	_	 1.00 0.08	•	 1.00	 Very limited Depth to water 	 1.00
Swartswood, extremely stony	 40 	Seepage	 1.00 0.08		 0.44 	 - Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of map	l	reas	 Embankments, dikes levees	, and	 Aquifer-fed excavated pond	ls
	unit unit 	· 		Rating class and limiting features		Rating class and limiting features	
298051 Wurtsboro, extremely stony	 	Slope	 1.00 1.00	· •	 1.00 0.37	i	 1.00
Swartswood, extremely stony	 40 	Slope	 1.00 1.00		 0.44 	 - Very limited Depth to water 	 1.00
298075 Colonie	 80 	Seepage	 1.00 0.68		 1.00 	 Very limited Depth to water 	 1.00
298188 Lackawanna, extremely stony	 85 	Slope	 1.00 0.70	•	 	 Very limited Depth to water	 1.00
298189 Lackawanna, extremely stony	 85 	Slope	 1.00 0.70	•	 	 Very limited Depth to water 	 1.00
298221 Swartswood, extremely stony	 90 	Seepage	 1.00 0.08		 0.44	 Very limited Depth to water 	1 1.00
298222 Swartswood, extremely stony	 90 	Slope	 1.00 1.00		 0.44 	 - Very limited Depth to water 	 1.00
298223 Swartswood, extremely stony	 85 	Slope	 1.00 1.00		 0.44 	 Very limited Depth to water 	 1.00
298255 Delaware, rarely flooded	 80 	Seepage			 1.00	 Very limited Depth to water 	1 1.00
298256 Delaware, rarely flooded	 80 	 Very limited Seepage 		 Very limited Piping 	 1.00	 Very limited Depth to water 	 1.00
298257 Wallpack	 85 	•	 1.00	 Not limited 	 	 Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of map		reas	 Embankments, dikes levees	, and		ls
	map unit 			 Rating class and limiting features 		 Rating class and limiting features 	
298258 Wallpack	 85 	•	 1.00	 Not limited 	 	 Very limited Depth to water 	 1.00
298259 Wallpack, extremely stony			 0.08	 Somewhat limited Piping 	 0.96	 Very limited Depth to water 	 1.00
298260 Wallpack, extremely stony	85	•	 1.00	• • • • • • • • • • • • • • • • • • • •	 0.96	 Very limited Depth to water 	 1.00
298261 Wallpack	 85 		 0.08	 Not limited 	 	 Very limited Depth to water 	 1.00
298262 Wallpack, extremely stony		•	 1.00	 Somewhat limited Piping	 0.96	 - Very limited Depth to water	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
298265 Venango, extremely stony	 90 		 0.08	 - Very limited Depth to saturated zone	 1.00	 - Very limited Depth to water -	 1.00
298266 Venango, extremely stony	 85 	•	 1.00	 - Very limited Depth to saturated zone	 1.00	 - Very limited Depth to water 	 1.00
298409 Swartswood, extremely stony	 90 	Seepage	 1.00 0.08		 0.44	 Very limited Depth to water 	 1.00
298411 Swartswood, extremely stony	 90 	Slope	 1.00 1.00	·	 0.44	 Very limited Depth to water 	 1.00
298413 Swartswood, extremely stony	 85 	Slope	 1.00		 0.44	 Very limited Depth to water 	 1.00
318498 Hazen, very stony	 60 	Seepage	 1.00 0.68	·	 1.00	 Very limited Depth to water 	 1.00
Hoosic, very stony	 35 	 Very limited Seepage	ĺ	 Very limited Seepage	 1.00	 Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

	 Pct. of map	l	reas	 Embankments, dikes levees 	, and	 Aquifer-fed excavated pond	s
	unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
318533 Hazen, very stony	 50 	·		 Very limited Seepage	 1.00	 Very limited Depth to water	 1.00
Hoosic, very stony	40 	· •	1 1.00	 Very limited Seepage 	1 1.00	 Very limited Depth to water	1 1.00
319783 Catden	 85 	•	 0.70 	content Ponding Depth to saturated zone Seepage	11.00	excavation walls	 0.10
319784 Fredon, very stony	 50 	· •	 1.00 	saturated zone	 1.00 1.00	excavation walls	 1.00
Halsey, very stony	 40 	_	 1.00 1.00 	Depth to saturated zone	 1.00 1.00 1.00	excavation walls	 1.00
543222 Andover, extremely stony		Slope	 0.08 0.02	· •	 1.00	 Very limited Depth to water 	 1.00
Buchanan, extremely stony		Seepage	 0.72 0.08	· •	 1.00	 - Very limited Depth to water -	 1.00
543243 Berks	 65 	Seepage	1.00 1.00	Thin layer 	 0.77 	 Very limited Depth to water 	 1.00
Weikert	 25 	Slope Depth to bedrock	11.00	Thin layer	 1.00 1.00	•	 1.00
543246 Buchanan	 75 	Seepage		•	 1.00 	 - Very limited Depth to water - 	 1.00
543247 Buchanan, extremely stony		Seepage	 0.72 0.08	•	 1.00	 Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. Of map	i I	reas	Embankments, dikes levees	, and		ls
	unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features 	
543257 Chippewa	 90 	 Not limited 	 	saturated zone	 1.00 1.00	į	 1.00
543258 Chippewa	 90 		 0.32 	saturated zone	 1.00 1.00	į	 1.00
543259 Chippewa, extremely stony	•		 0.08 	 - Very limited Depth to saturated zone	 1.00	 - Very limited Depth to water 	 1.00
543271 Delaware	 90 	· -	 1.00	 Not limited 	 	 Very limited Depth to water	 1.00
543276 Fluvaquents	 85 		 0.02	 Very limited Depth to saturated zone	 1.00	 Somewhat limited Unstable excavation walls	0.10
543292 Hazleton, extremely stony		Seepage	1.00 1.00	Large stones Thin layer	 0.10 0.02	•	 1.00
543293 Hazleton, extremely stony		Seepage	 1.00 1.00	•	 0.10 	 - Very limited Depth to water 	 1.00
543299 Laidig, extremely stony	 90 	Seepage	 1.00 0.08 	•	 0.24 	excavation walls Slow refill	 1.00 0.98 0.38
543300 Laidig, extremely stony	 90 	Slope	 1.00 1.00	•			 1.00 0.98 0.38

Table 13.--Ponds and Embankments--Continued

	Pct. Of map	İ	reas	Embankments, dikes levees		Aquifer-fed excavated pond	s
	map unit 	· 		Rating class and limiting features 			
543304 Laidig	 50 	Slope		 Somewhat limited Depth to saturated zone 		excavation walls Slow refill	0.98 0.38
Rubble land	 40 	Seepage	 1.00 1.00	•	 1.00 1.00	•	 1.00
543318 Rubble land	 75 	Seepage	 1.00 1.00	•	 1.00 1.00	•	 1.00
543327 Swartswood	 90 	Seepage	 0.72 0.68	· •	 0.62	 Very limited Depth to water 	 1.00
543328 Swartswood	 90 	Slope		•	 0.62 	 - Very limited Depth to water -	 1.00
543330 Swartswood, extremely stony	 50 	Seepage		 Somewhat limited Depth to saturated zone	 0.62	 Very limited Depth to water 	 1.00
Wurtsboro, extremely stony	 30 	Seepage	 0.72 0.08	•	 1.00	 Very limited Depth to water 	 1.00
543331 Swartswood, extremely stony	 50 	 Very limited Slope Seepage	•	 - Somewhat limited Depth to saturated zone	 0.62	 Very limited Depth to water 	 1.00
Wurtsboro, extremely stony	 30 	_	 1.00 0.72	•	 1.00	 Very limited Depth to water 	 1.00
543359 Volusia	 85 	 Somewhat limited Slope 	 0.32 	· •	11.00	Unstable	 0.28 0.10
543360 Volusia, extremely stony	 85 85 		 0.08 	 - Very limited Depth to saturated zone Piping 	11.00	Unstable	 0.28 0.10

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. Of map	l	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond: 	s
	unit 	· —		Rating class and limiting features		Rating class and limiting features	
543374 Wurtsboro	 90 	Seepage	 0.72 0.68	Depth to	 1.00	 Very limited Depth to water 	 1.00
543375 Wurtsboro	 90 	· •	 1.00 0.72	•	 1.00	 Very limited Depth to water 	 1.00
612280 Scio	 80 	•	 0.72 	saturated zone	11.00	Unstable	 0.28 0.10
612666 Colonie	 80 	· •	 1.00	 - Very limited Seepage 	 1.00	 - Very limited Depth to water 	 1.00
612668 Hoosic, very stony	 60 	Seepage	 1.00 1.00	·	 1.00	 Very limited Depth to water 	 1.00
Hazen, very stony	 30 	Seepage	 1.00 1.00	Seepage	 1.00	 Very limited Depth to water 	 1.00
612724 Lordstown, very rocky	 50 	Slope	1.00 0.70	Seepage	 0.66 0.36	· •	 1.00
Wallpack, very rocky	 40 	_	 1.00	•	 0.96	 Very limited Depth to water 	 1.00
612732 Atherton, very poorly drained	 60 	_	 1.00 	Ponding Depth to saturated zone	 1.00 1.00 0.87	excavation walls	 0.10
Atherton, poorly drained	 30 		 0.70 	saturated zone		Unstable	 0.30 0.10
612738 Fluvaquents, occasionally flooded	 90 	_	 1.00 	saturated zone Piping	1.00 1.00	excavation walls	 0.10

Table 13.--Ponds and Embankments--Continued

	 Pct. of map	l	reas	 Embankments, dikes levees	, and	 Aquifer-fed excavated pond	ls
	unit 			Rating class and limiting features		Rating class and limiting features	
612753 Wallpack, aeolian mantle, very stony-	 85 	 Very limited Slope Seepage	 1.00 0.70	•	 	 Very limited Depth to water 	 1.00
612756 Wallpack, aeolian mantle, very stony-	 85 	 Somewhat limited Seepage Slope	 0.70 0.08	•	 	 Very limited Depth to water 	 1.00
612757 Wallpack, aeolian mantle, very stony-	 85 	 Very limited Slope Seepage	 1.00 0.70	•	 	 Very limited Depth to water 	 1.00
612767 Wellsboro, extremely stony	 85 	 - Very limited Slope Seepage	 1.00 0.70	•	 1.00	 - Very limited Depth to water 	 1.00
612768 Wellsboro, extremely stony	 85 	 Somewhat limited Seepage Slope	 0.70 0.08	•	 1.00	 - Very limited Depth to water -	1 1.00
613393 Alden, extremely stony	 90 	 Somewhat limited Seepage 	 0.03	Depth to saturated zone	 1.00 1.00 0.20	excavation walls	 0.10
613447 Unadilla	 85 	 Very limited Seepage 		 Very limited Piping 		 Very limited Depth to water 	 1.00
613448 Unadilla	 85 	 Very limited Seepage Slope		 Very limited Piping 	 1.00	 Very limited Depth to water 	 1.00
614075 Wurtsboro, extremely stony	 80 	 Very limited Slope Seepage 	 1.00 1.00	· =	 1.00 0.37	Ī	 1.00
Swartswood, extremely stony	 20 	 Very limited Slope Seepage 	 1.00 1.00		 0.44 	 - Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of map	İ	reas	 Embankments, dikes levees 	, and	•	s
	unit	Rating class and		Rating class and limiting features		-	
620179 Arnot, very rocky		Depth to bedrock		Seepage		•	 1.00
Lordstown, very rocky		Slope	1.00 0.70	Thin layer Seepage		•	 1.00
620180 Arnot		-	11.00	Seepage		 Very limited Depth to water 	 1.00
Lordstown		Slope	1.00 0.70	Seepage		 Very limited Depth to water 	1 1.00
Rock outcrop	 15 	 Not rated 	 	 Not rated 	 	 Not rated 	-
620181 Arnot	 60 	·	11.00	Seepage		 Very limited Depth to water 	1 1.00
Lordstown		Slope	1.00 0.70	Seepage		 Very limited Depth to water 	 1.00
Rock outcrop	 15 	 Not rated 	! !	 Not rated 	 	 Not rated 	
623089 Chippewa, extremely stony		 Not limited 	 	Ponding Depth to saturated zone	1.00 1.00	l I	 1.00
623109 Farmington	 50 	Depth to bedrock		-	 1.00 1.00	•	 1.00
Rock outcrop	 40 	 Not rated 	! !	 Not rated 	 	 Not rated 	
624811 Galway, very rocky	80 	 Very limited Slope Depth to bedrock Seepage	 1.00 0.98 0.70	i	 0.98 	 Very limited Depth to water 	 1.00
624813 Lackawanna, extremely stony	 85 		 0.70 0.08		 	 - Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. of map	l	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	unit			Rating class and limiting features 			
624816 Lordstown, very rocky	 50	Slope	1.00 0.70	Thin layer Seepage	 0.66 0.36	· -	 1.00
Wallpack, very rocky	 35 	_			1 0.96	 Very limited Depth to water	11.00
624822 Lordstown	 50 	Slope	1.00 0.70	Seepage	 0.66 0.36	· •	 1.00
Wallpack	 35 		 1.00	 Not limited 	 	 Very limited Depth to water	1 1.00
624823 Lordstown	 50 	Slope	11.00	Thin layer Seepage	 0.66 0.36	· -	 1.00
Wallpack	 35 	·	 1.00	 Not limited 	 	 Very limited Depth to water	1 1.00
624824 Lordstown	 50 	Seepage Depth to bedrock	10.70	Seepage	 0.66 0.36	· •	 1.00
Wallpack	 35 	•	 0.08	 Not limited 	 	 Very limited Depth to water	1 1.00
624826 Manlius, very rocky-	 60 	·	1.00 1.00	Large stones	 0.93 0.42	· -	 1.00
Nassau, very rocky	 25 	 Very limited Slope Depth to bedrock 	1.00	Large stones	 1.00 0.39 0.20	i -	 1.00
624827 Nassau, very rocky	 55 	 Very limited Depth to bedrock Slope 		Seepage	 1.00 0.20 0.15	Ī	 1.00
Manlius, very rocky-	 44 	 Very limited Seepage Depth to bedrock Slope 	11.00	Large stones	 0.88 0.33 	· •	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	Pct.	İ	reas	Embankments, dikes levees	, and	=	ls
	map unit 			Rating class and limiting features		•	
624828 Nassau, very rocky		_	11.00	Thin layer Seepage		İ	 1.00
Manlius, very rocky-	 44 	Slope	1.00 1.00	Thin layer Large stones	 0.88 0.33 	•	 1.00
624829 Nassau, very rocky	 55 	=	11.00	Seepage	 1.00 0.20 0.15	i -	 1.00
Manlius, very rocky-	 44 	Slope	1.00 1.00	Thin layer Large stones		 Very limited Depth to water 	 1.00
624832 Nassau	 50 		11.00	Thin layer Large stones			 1.00
Rock outcrop	 45	 Not rated	 	 Not rated	 	 Not rated	!
624841 Oquaga	 60 	Slope Depth to bedrock	11.00	Thin layer Large stones		 - Very limited Depth to water 	 1.00
Rock outcrop	 25 	 Not rated 	 	 Not rated 	 	 Not rated 	
624845 Rock outcrop	 45	 Not rated	 	, Not rated	i i	, Not rated	i i
Farmington	 35 		1.00	Piping	1.00 1.00	_	 1.00
Galway	20 	Slope Depth to bedrock	11.00	Somewhat limited Thin layer 	 0.98 	 Very limited Depth to water 	 1.00
624846 Rock outcrop	l I 40	 Not rated	i I	 Not rated	İ	 Not rated	İ
Arnot	İ	 Very limited	 1.00	 Very limited Seepage	İ	 Very limited Depth to water	 1.00
Rubble land	 20 	Seepage Slope	1.00 1.00		 	 Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. of map	l	reas	Embankments, dikes levees		Aquifer-fed excavated pond	s
	unit 	· 		Rating class and limiting features		Rating class and limiting features	
626816 Udifluvents, occasionally flooded	 90 	_	 1.00 	saturated zone	0.18 	 - - Very limited Unstable excavation walls Depth to saturated zone	 1.00 0.44
635458 Oquaga, very rocky	 55 	Slope Depth to bedrock	11.00	Large stones	 0.96 0.01	· •	 1.00
Lackawanna, very rocky	 30 	Slope	 1.00 0.70	•	 	 - Very limited Depth to water -	 1.00
635459 Oquaga, very rocky	50 	Slope Depth to bedrock	11.00	Large stones	 0.96 0.01 	•	 1.00
Lackawanna, very rocky	 35 	Slope	 1.00 0.70		 	 - Very limited Depth to water 	 1.00
740953 Delaware, rarely flooded	 80 	·		 Very limited Piping 	 1.00	 Very limited Depth to water 	 1.00
740968 Nassau, very rocky	 55 	·	11.00	Seepage	 1.00 0.20 0.15	i -	 1.00
Manlius, very rocky-	 44 	Slope	1.00 1.00	Large stones	 0.88 0.33 	•	 1.00
740969 Nassau, very rocky	 55 	 Very limited Slope Depth to bedrock	11.00	· -	 1.00 0.20 0.15	i -	 1.00
Manlius, very rocky-	44 44 	Slope	1.00 1.00	Large stones	 0.88 0.33	•	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of	i I	reas	Embankments, dikes levees		Aquifer-fed excavated pond	ls
	map unit 			Rating class and limiting features 		 Rating class and limiting features 	
740971 Oquaga, very rocky	 55 	Slope Depth to bedrock	11.00	Large stones	 0.96 0.01	· =	 1.00
Lackawanna, very	 30 	Slope	 1.00 0.70	•	 	 Very limited Depth to water 	1 1 1 1 1 1 1 1 1 1
740972 Oquaga, very rocky	 50 	Slope Depth to bedrock	11.00	Large stones	 0.96 0.01	•	1.00
Lackawanna, very rocky	 35 	Slope	 1.00 0.70	•	 	 Very limited Depth to water 	1 1 1 1 1 1 1 1 1 1
740974 Oquaga	 60 	Slope Depth to bedrock	11.00	Large stones	 0.96 0.01	· •	 1.00
Rock outcrop	25	 Not rated 	 	 Not rated	! 	 Not rated 	
740975 Rock outcrop	 40	 Not rated 	 	 Not rated	 	 Not rated 	
Arnot	30 	-	11.00		 1.00 1.00	•	 1.00
Rubble land	 20 	Seepage	 1.00 1.00		 	 Very limited Depth to water 	 1.00
740987 Scio	 80 		 0.72 	saturated zone	 1.00 1.00	Unstable	 0.28 0.10
740988 Udifluvents, occasionally flooded	 90 	 Very limited Seepage 	 1.00 	saturated zone	 0.18 0.08	excavation walls	 1.00 0.44
740991 Unadilla	 85 	 Very limited Seepage 	 1.00	 	 1.00	 - Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of map	l	reas	 Embankments, dikes levees 	, and	 Aquifer-fed excavated pond	ls
	unit 			Rating class and limiting features		Rating class and limiting features	
740992 Unadilla	 85 	Seepage	 1.00 0.68		 1.00	 Very limited Depth to water 	 1.00
740995 Wellsboro, extremely stony	 85 	Seepage	 0.70 0.08	· -	 1.00	 Very limited Depth to water 	 1.00
740996 Wellsboro, extremely stony	 85 		 1.00 0.70	· •	 1.00	 Very limited Depth to water 	 1.00
741149 Lackawanna, extremely stony	 85 	Slope	 1.00 0.70	•	 	 - Very limited Depth to water 	 1.00
741150 Lackawanna, extremely stony	 85 		 1.00 0.70	•	 	 Very limited Depth to water 	 1.00
801114 Oquaga	 75 	Slope Depth to bedrock	11.00	Large stones	 0.96 0.01	· •	 1.00
Rock outcrop	 15	 Not rated 		 Not rated		 Not rated	
810906 Oquaga	 75 		11.00	Large stones	 0.96 0.01	•	 1.00
Rock outcrop	 15	 Not rated	!	 Not rated	!	 Not rated	!
1147465 Alden, extremely stony	 90 	•		Depth to saturated zone		Ì	 0.10
1147467 Arnot, very rocky	 55 	Depth to bedrock			 1.00 1.00	•	 1.00

Table 13.--Ponds and Embankments--Continued

	Pct. of map	l	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	unit 			Rating class and limiting features		Rating class and limiting features 	
1147467 Lordstown, very rocky	 40 	Slope	1.00 0.70	Seepage	 0.66 0.36	· =	 1.00
1147468	;	! !	<u> </u>	;	<u> </u>	1	i .
Arnot	 45 	-	11.00		 1.00 1.00	•	 1.00
Lordstown	40 	Slope	1.00 0.70	Seepage	 0.66 0.36 	· •	 1.00
Rock outcrop	 15 	 Not rated 	' 	Not rated	, 	 Not rated 	
1147469	İ	İ	i	İ	İ	İ	i
Arnot	60 		11.00		 1.00 1.00	•	 1.00
Lordstown	 25 	Slope	1.00 0.70	Seepage	 0.66 0.36	•	 1.00
Rock outcrop	1 15	 Not rated 	! !	Not rated	 	Not rated	
1147470 Atherton, very	 	 	 	 	 	 	
poorly drained	60 	-	 1.00 	Depth to saturated zone		İ	 0.10
Atherton, poorly drained	 30 		 0.70 	 Very limited Depth to saturated zone Piping	 1.00 0.34	Unstable	 0.30 0.10
1147471	 	 	 	 	 	 	
Catden	85 	Somewhat limited Seepage 	 0.70 	content Ponding Depth to	 1.00 1.00 1.00 1.00 1.00	excavation walls	 0.10

Table 13.--Ponds and Embankments--Continued

	Pct. of map	l	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	unit unit 	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features 		Rating class and limiting features 	
1147474 Chippewa, extremely stony		 Not limited 	 	•	 1.00 1.00 0.96	i I	 1.00
1147475 Colonie	 80 	 - Very limited Seepage	 1.00	 Very limited Seepage	1 1.00	 Very limited Depth to water	1 1 1 00
1147478 Delaware, rarely flooded	 80 	 Very limited Seepage Slope	 1.00 0.68		 1.00	 Very limited Depth to water 	 1.00
1147482 Fredon, very stony	 50 	 Very limited Seepage 	 1.00	 Very limited Depth to saturated zone Seepage	 1.00 1.00	excavation walls	1 1.00
Halsey, very stony	40 	 Very limited Seepage 	 1.00 	Depth to saturated zone	 1.00 1.00 1.00	excavation walls	1 1.00
1147485	 	 	1	 	1	 	1
Hazen, very stony	60 	 Very limited Seepage Slope	 1.00 0.68		1.00	 Very limited Depth to water 	 1.00
Hoosic, very stony	35 	 Very limited Seepage Slope	 1.00 0.68		1.00	 Very limited Depth to water 	11.00
1147490 Hoosic, very stony	 60 	 Very limited Seepage Slope		 Very limited Seepage 	1 1.00	 Very limited Depth to water 	 1.00
Hazen, very stony	 30 	 Very limited Seepage Slope	 1.00 1.00		 1.00	 Very limited Depth to water 	 1.00
1147491 Hoosic, very stony	 50 	 Very limited Seepage Slope		 Very limited Seepage 	 1.00	 Very limited Depth to water 	 1.00
Otisville, very stony	 40 	 Very limited Seepage Slope 	1.00 1.00		 1.00	 Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	Pct. Of map	i I	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
	unit	· — — — — — — — — — — — — — — — — — — —		Rating class and limiting features		Rating class and limiting features	
1147492 Lackawanna, extremely stony	 85 	Seepage	 0.70 0.08	 Not limited 	 	 Very limited Depth to water 	 1.00
1147500 Wurtsboro, extremely stony	 90 	Seepage	 1.00 0.08	saturated zone	 1.00 0.37	 - Very limited Depth to water -	 1.00
1147501 Wurtsboro, extremely stony	 60 	Seepage	 1.00 0.08	saturated zone	 1.00 0.37	 - Very limited Depth to water -	 1.00
Swartswood, extremely stony	 40 	Seepage	 1.00 0.08		 0.44 	 Very limited Depth to water 	 1.00
1147502 Wurtsboro, extremely stony	 60 	Slope	 1.00 1.00	saturated zone	 1.00 0.37	 - Very limited Depth to water 	 1.00
Swartswood, extremely stony	 40 	Slope	 1.00 1.00		 0.44 	 Very limited Depth to water 	 1.00
1147527 Udorthents	 60 	Seepage	 1.00 0.08	 Somewhat limited Seepage 	 0.58 	 Very limited Depth to water 	 1.00
Urban land	40	 Not rated 	! !	Not rated	! !	 Not rated	
1147532 Udorthents	 100 	Seepage	 1.00 0.08		 0.58 	 Very limited Depth to water 	 1.00
1147533 Wurtsboro, extremely stony	 80 	Slope	 1.00 1.00	saturated zone	 1.00 0.37	İ	 1.00
Swartswood, extremely stony	 20 	Slope	1.00 1.00		 0.44 	 Very limited Depth to water 	 1.00

Table 13.--Ponds and Embankments--Continued

and soil name	 Pct. of map	l	reas	 Embankments, dikes levees		Aquifer-fed excavated pond	ls
	unit			Rating class and limiting features		•	
1948749 Arnot	 90 	Depth to bedrock Slope		i -	 1.00 	 Very limited Depth to water 	 1.00
1948750 Arnot	 90 	Slope Depth to bedrock	1.00	Thin layer	 1.00 	 Very limited Depth to water 	 1.00
1948751 Arnot	 90 	Slope Depth to bedrock	11.00	i -	 1.00 	 Very limited Depth to water 	 1.00
1948774 Conotton	 90 	Seepage	 1.00 0.68	Seepage	 0.86 	 Very limited Depth to water 	 1.00
1948775 Conotton	 95 	Seepage	 1.00 1.00	Seepage	 0.86	 Very limited Depth to water 	 1.00
1948776 Conotton	 95 	Seepage	 1.00 1.00		 0.86	 Very limited Depth to water 	 1.00
1948777 Conotton	 95 	Seepage	 1.00 1.00		 0.86	 Very limited Depth to water 	 1.00
1948797 Manlius	 90 	 Somewhat limited Depth to bedrock Seepage Slope	•	Thin layer Seepage	•	 Very limited Depth to water 	 1.00
1948802 Manlius	 90 	 Very limited Slope Depth to bedrock Seepage	11.00	Seepage	 0.81 0.09	•	 1.00
1948818 Manlius	 90 	 Very limited Slope Depth to bedrock Seepage	11.00	Seepage	 0.81 0.09	· -	 1.00
1948832 Penargyl	 90 	 Somewhat limited Seepage Slope 	 0.72 0.68		 	 Very limited Depth to water 	 1.00

Soil Survey of Delaware Water Gap National Recreation Area

Table 13.--Ponds and Embankments--Continued

Map unit symbol and soil name	Pct. of map	İ	reas	Embankments, dikes levees	, and	Aquifer-fed excavated pond	ls
		·		Rating class and limiting features		Rating class and limiting features	Value
1948846	 	 	 	 	 	 	
Phelps	90 	Very limited Seepage Slope	 1.00 0.32	•	 1.00	Very limited Unstable excavation walls	11.00
	 	STOPE 	 	Seepage	11.00		'
1948855	I	I	1	I	1	I	I
Udorthents, loamy	95	•		Very limited		Very limited	I
	 	Seepage Slope 	1.00 0.08 		1.00 1.00	excavation walls	1.00
1948989	 	 	 	 	 	 	1
Urban land	65	Not rated	į	Not rated	į	Not rated	į
Delaware	 25 	 Very limited Seepage	11.00	 Not limited 	 	 Very limited Depth to water	1 1 1 1 1 1 1 1 1 1
	 	Slope 	0.08 	 	 	 	

Table 14.--Engineering Properties [Absence of an entry indicates that data were not estimated]

			Classi	Classification	Frag	Fragments	P.	Percentage pas	ge pas
and soil name	l Depui	OSDA cexture			>10	3-10		steve number	number
			Unified	AASHTO	ri ui	ri ui	4	10	1 40
	In				Pct	Pct			
290836 Hoosic verv									
stony	0-1	Slightly decomposed plant material	PT	A-8	0	o -	100	100	100
	1-9	Gravelly loam	MI, GC, GC-GN	GC, GC-GM A-6, A-4,	0	o 	157-97	145-97	37-87
	9-21	 Loam, sandy loam, very	 SC, GP, GM	A-2-4 A-6, A-1-a	0	0-21	 38-85	7-85	4-61
			. 						
	21-27	Sand, coarse sand,	SC-SM, GP,	A-2-4,	0	0-51	41-85	8-18	3-54
	_	extremely gravelly	GP-GM	A-1-b, A-1-a	_	_	_	_	_
	_	loamy coarse sand,	_	_	_	_	_	_	_
	_	loamy sand	_	_	_	_	_	_	_
	1 27-37	Loamy sand, sand,	SC-SM, GP	A-1-b, A-1-a	0-14	0-51	137-85	82-9	1 2-48
	_	extremely gravelly	_	_	_	_	_	_	_
	_	coarse sand, loamy	_	_	_	_	_	_	_
	_	coarse sand	_	_	_	_	_	_	_
	37-49	Loamy sand, sand,	ISC-SM, GP, SE	SP A-1-b, A-1-a	0	0-51	41-85	82-9	1 2-48
	_	extremely gravelly	_	_	_	_	_	_	_
	_	coarse sand, loamy	_	_	_	_	_	_	_
	_	coarse sand	_	_	_	_	_	_	_
	1 49-60	Loamy sand, sand,	GP, SC-SM, SF	GP, SC-SM, SW A-1-b, A-1-a	0-14	0-51	41-85	82-9	1 2-48
	_	extremely gravelly	_	_	_	_	_	_	_
	_	coarse sand, loamy	_	_	_	_	_	_	_
	_	coarse sand	_	_	_	_	_	_	_
	_	_	_	_	_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

Map unit symbol	Depth	USDA texture	Classi	Classification	Fragi	Fragments	- - -	Percentage pas	ge pas
and soil name	4				>10	3-10			
			Unified 	AASHTO	i n	 ri 	4 4 —	 01	1 40
290836	In				Pct	Pct			
Otisville, very	_	_	_	_		_	_	_	_
stony	0-1	Slightly decomposed plant material	_ PT_	A-8	 o	 0	_ 100 	- 1 00 	100
_	1-2	Gravelly sandy loam	SC-SM, SM	A-2-4, A-1-b	0	0	64-92	51-84	137-66
_	1 2-7	Sand, loamy fine sand,	SM, SP-SM,	A-1-b, A-1-a	0	1 0-7	160-73	41-60	125-49
_		coarse sand, very	NS-SW			_	_	_	_
-		gravelly loamy sand,							
		coars	Ç			1		1	
-	11-/	Sand, Loamy rine sand,	SM, SP, SP-SM	A-I-D, n 2 4 n 1	>	- - -	22-82 -	- 2/-2T	リーツー 40-04
_		coarse sama, very gravelly loamy coarse		A-Z-4, A-I-A					
_		sand, loamy sand	_	_					
_	11-19	loamy f	SM, SP, SW-SM	SW-SM A-2-4, A-1-a	0	0-14	151-93	1 7-78	3-54
_		se sand, ver		_	_	_	_	_	_
_	_	gravelly loamy coarse	_	_		_	_	_	_
_		, loamy	_		_	_	_	_	_
_	19-31	Loamy sand, extremely	SM, SP	A-1-b, A-1-a	0	0-25	51-93	7-78	3-48
_	_	lly coarse san	_						
_		coars							
	31-43		SM, SP, SW	A-1-b, A-1-a	0	0-25	51-93	1 2-78	3-48
		10	_						
-									
	73-67	Coarse sand	מ מ					001-00	1 40-74
_	001				>	> -	001	001-761	# 0 # -
_				· -			_		
		loamy sand, coarse sand							
296265									
Alden	6-0	silt loam	lor	IA-5	0	0	180-100	80-100 75-100	65-95
	9-35	Silty clay loam, silt	_ <u>C</u> F	A-4	0	o 	80-100	80-100 75-100	65–95
_	35-60	Loam Gravellv loam	CI.	A-4	0	0-2	160-95	1 50-90	145-90
_									
296269	_								
F.Luvents,	<u> </u>		- A	- K			75-100	75-100160-100150-80	
(alluvial land)	6-42	Sandy loam	MI	A - 4	00	0-10	175-100	/3-100 60-100 30-80 75-100 60-100 50-90	50-80 50-90
_	42-60	Gravelly silt loam	CI	A-6	0	0	95-100	95-100 95-100 80-10	80-10
_		_	_	_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

			CJ	assifi	Classification	-	Fragn	Fragments	l Pe	Percentage	Je pas
Map unit symbol	Depth	USDA texture		-			>10	3-10	_,_	sieve number	number
			Unified	 g	AASHTO	아	di H	n i	4	10	40
120300	In			' 		' 	Pct	Pct			
Alvira	0-10	 Gravelly loam, gravelly	ML	- 44	A-4		0-5	3-15	170-100	60-95	55-90
			_ ;	_ :			_ (,		L	
	TZ-0T	Gravelly Silt Loam,	- -	<u> </u>	A-4		>	01-0	06-66 001-69	08-00	06-06-
- -	21-60	Very gravelly silt loam, gravelly silt	占	· -	A-4		0	0-20	165-95	45-90	40-90
		loam									
Watson	0-10	loam, silt	ML	- 44	A-4		0-5	3-10	170-90		60-85
	10-27 27-60 	Gravelly silty clay loam CL Gravelly clay loam, CL gravelly silty clay	년 년 <u>-</u>	<u> </u>	A - 6		00	0-10	70-100 65-95 55-100 50-10 	0	60 – 95 45 – 95
296272	_			_		-	_		_		
Bath	8-0	silt	Ä.				0 (5-15	155-80	50-75	140-75
-	8-27	silt lo	SM, ML, G	GM - A	A-4, A-2	, A-1	0	2-10	52-92	20-90	40-85
		gravelly loam, very									
_	1 27-60	silt loam,	MI, SM,	- «	A-4, A-2,	, A-1	0	10-15	130-80	25-75	15-75
_	_	y loam, very	-GM,	GM		-			_		
	- 5	>-	_ ;	_ :				,	_ 6		, 1
	60-64	silt lo			A-4, A-2,	, A-1	 -	10-15	08-051	25-75	115-75
- -		channery loam channery loam	, de la la la la la la la la la la la la la	 							
296273											
Bath	8-0	Channery silt loam	SM, ML, G	GM A	A-4, A-2	_	0	5-15	155-80	50-75	140-75
_	8-27	ທ	SM, MI, G	GM LA	A-4, A-2,	, A-1	0	5-10	52-92	20-90	40-85
		gravelly loam, very channery silt loam									
_	1 27-60	silt loam,	MI, SM,	4	A-4, A-2,	, A-1	0	10-15	130-80	25-75	115-75
		/ loam, very	-GM,	GM G		_					
		silt loam	_	_ :				7		L	
	60-64	Channery Silt Loam, Channery	GM, SM,	GC-GMI	A-4, A-2,	, A-1	>	T0-T2	130-80	27-27	G/-GT
-		loam		-		-					
_	_	_	_	-		-			_		_

Table 14. -- Engineering Properties -- Continued

			[5]	Classification	- Fra	Fragments	-	Percentage pas	28.0
Map unit symbol	Depth	USDA texture						sieve number	ge Fee number
and soil name	_	_		_	>10	1 3-10	_		
			Unified 	AASHTO	 ni	 - -	4	10	1 40
710300	In				Pot	Pct			
Bath	8-0		ML,	A-2	o - –	5-15	155-80	150-75	 40-75
	8-27	Channery silt loam, gravelly loam, verv	SM, ML, GM	A-4, A-2, A-1 		5-10	155-95	150-90	40–85
_	;	y silt l		•		:	:	: !	;
_	27-60	silt lo	SM,	A-4, A-2, A-1	0 1	110-15	130-80	25-75	15-75
		gravelly loam, very	GC-GM, GM						
	60-64	silt 1	GM, SM,	A-4, A-2, A-1	11 0	110-15	130-80	125-75	115-75
- - -			CL-ML, GC-GM						
770300									
Bath	8-0	 Channerv silt loam	ISM. MI. GM	 A-4, A-2	0-5	1 5-20	155-80	150-75	140-75
	8-27		Ř)	5-10	155-95	150-90	140-85
_					_	_	_	_	_
_	27-60	hannery l		A-4, A-2, A-1	11 0	110-15	130-80	125-75	115-75
		channery s	GC-GM, GM						
		loam, gravelly sandy loam							
_	60-64	Flaggy loam, channery		A-4, A-2, A-1	11 0	110-15	130-80	125-75	115-75
		silt loam, very channery sandy loam	CL-ML, GC-GM 	WE					
296276									
Bath	0-8	Channery silt loam	SM, ML, GM	A-4, A-2	0-5	1 5-20	155-80	150-75	140-75
_	8-27	loam, s		A-4, A-2, A-1	11 0	1 5-10	155-95	150-90	140-85
	1	ı, gravell		(_ :	_ :	_ '
	7.7-60	Very channery Loam,	IML, SM,	A-4, A-2, A-1 	0 -	110-15	08-08-	6/-62	T5-75
		gravelly	j						
_	60-64	Flaggy loam, channery	GM, SM,	A-4, A-2, A-1	11 0	110-15	130-80	125-75	115-75
_		n, very	CL-ML, GC-GM	- IME	_	_	_	_	_
 		channery sandy loam - -							
Benson	8-0	Channery silt loam,	CI	A-4	o 	110-30	175-90	170-85	160-85
_		nery loan			_	_ ;	_ :	_ :	_ :
	8-18	Very channery silt	၁၅ _	A-4	o 	115-50	140-85	135-80	30-80
-		γ (1) γ							
_	18-22	Unweathered bedrock	-	-	-	-	-	-	-
_		_	_	_	_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Classi	Classification	Frac	Fragments		Percentage pas	ge pas
and soil name	l Depui	OSDA CEXCUIE			_ >10	1 3-10		steve number	number
			Unified	AASHTO	i ni	i ri	4	10	1 40
206278	In				Pct	Pot			
Benson	8-0	 Channery silt loam,	CL	B-4	o - –	110-30	175-90	170-85	 60–85
	 8-18	channery loam Very channery silt		 A-4	。 	 15-50	 40-85	 35-80	 30-80
		loam, very channery							
	1 18-22	Loam Unweathered bedrock 	¦ 	¦ 			¦ 		
296279 Benson	8-0	 - Channery silt loam,		A-4	0	10-30	 75-90	 70-85	 60-85
	_	channery loam	_		_	_	_	_	_
	8-18	Very channery silt loam, very channery	ည္ _	A-4 	o 	15-50 	40-85 	35-80 	30-80
	1 18-22	loam Unweathered bedrock							
296280									
Braceville	0-3	Gravelly loam	MI, SM, CL,	A-4, A-2, A-1	0 -	0-10	165-90	08-091	140-70
	3-30	Gravelly sandy loam, silt loam, gravelly	ML, SM, CL-ML, GC-GM	A-4, A-2, A-1	0	0-10	 65-100 	65-100 60-100 40-10	40-10
	30-55	Silt loam Gravelly sandy loam, gravelly silt loam	MI, SM, CI:-MI, GC-GM	A-4, A-2, A-1	0	0-11	173-100	73-100 27-100	122-96
	55-60	elly sand	ΩI	A-4, A-2, A-1	- 	0-15	 40-100 	40-100 35-100 25-90	125-90
296281									
Braceville	e-0 -	Gravelly loam 	ML, SM, CL,	A-4, A-2, A-1	0 -	0-10	165-90	160-80	40-70
	3-30	Gravelly sandy loam, silt loam, gravelly	ML, SM, CL-ML, GC-GM	A-4, A-2, A-1	0	0-10	65-100 	65-100 60-100	40-10
	30-55	loam lly sandy ally silt	 ML, SM, CL-ML, GC-GM	A-4, A-2, A-1	0	0-11	 73-100 	73-100 27-100 22-96 	 22-96
	55-60 	very gravelly loam Stratified sand and gravel	 GW-GM, SM, GM, GP-GM	 A-4, A-2, A-1 	- 	0-15	 40-100 	40-100 35-100 25-90 	 25-90

Table 14. -- Engineering Properties -- Continued

Man init symbol	Denth	USDA texture	Classi	Classification	Frag	Fragments		Percentage pas	ge pas
and soil name	ind of	- H			>10	1 3-10		2	
			Unified	AASHTO	in	ni ni	4	10	40
296283	In				Pct	Pct			
Buchanan	0 - 4	Channery loam 	GM, MI, CI,	A-6, A-4, A-2	2-15	115-35	150-85	45-70	40-70
	4-25	Gravelly loam, silt loam, gravelly sandy	MI, SM, CI,	A-6, A-4, A-2	0	0-20	50-100	145-90	40-90
	25-60	Gravelly loam, loam,	MI, SM, CL,	A-6, A-4, A-2	0	0-20	 50-100 	130-80	 30-75
296288									
Chippewa	8-0-	Silt loam	MI	A-5	0	0-5	180-100	175-1001	65–95
	8-16	Channery silt loam	<u>G</u>	A-4	0 0	1 5-10	165-85	160-85	145-85
_	0 1 0	nnery) 	 	•	24 -	20 -	2)
	48-80	<pre>gravelly loam, channery silt</pre>	29	A-4	0	110-15	160-80	155-70	45-70
Norwich	8-0	 Silt loam	M	A-5	0	0-5	180-100	175-95	 65–90
_	8-16	Channery silt loam	CI	A-4	0	0-15	165-95	165-90	160-85
_	16-48	silt		A-4	0	110-20	06-091	155-70	135-70
_	48-80	nery s:		A-4, A-2	0	110-15	08-09 l	155-70	145-70
		loam, channery loam, channery silt loam	CL-ML, GM 						
296289		-			, L			1	100
Culppewa	0 - -	cnannery silt loam, silt loam	E 0 _	C-\-	CT-7	07-0	06-09-	0/-09-	0/-06
	8-16	Channery silt loam	- G	A-4	0	5-10	165-85	160-85	45-85
_	16-48	silt loam,	_	A-4	0	110-25	08-091	155-70	145-70
	9	very channery silt loam		_ 5	c	- 1	- 0	10	76
	0 4	very gravelly loam, very channery silt loam 	<u>.</u>	*	N I O	67-01-	00-00-	0/100	0/10#-
Norwich	8-0	 Channery silt loam,	ML	A-5	2-15	115-25	170-90	 65-85	 60–80
_	_	Ħ		_		_	_	_	_
_	8-16	silt	CI	A-4	0	0-15	165-95	165-90	160-85
_	16-48				0	110-25	06-091	155-70	135-70
	48-80	Very channery silt loam, channery loam,	SM, GC, ML, CL-ML, GM	A-4, A-2 	0	10-15 	60-80 	55-70 	45-70
		channery silt loam							
296295 Idorthents cut									
_	_	_	_	_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

Map unit symbol	Depth	USDA texture	Classi	Classification	Frag	Fragments		Percentage pas	ye pas
and soil name	i i				>10	1 3-10	. –		
			Unified	AASHTO	ni n	i ni	4	10	40
796297	In				Pct	Pct			
Dekalb	0-7	Very channery loam, extremely stony loam	SC-SM	A-4	2-15	115-30	150-90	45-80	40-75
- 	7-24	channe channe	SC-SM	A-4	0	5-40	50-85	40-75	40-75
	24-32 	loam Very channery sandy loam, channery silt		 A-2 	0	 10-50 	 45-85 	125-75	 20-65
	32-36	loam Unweathered bedrock 	¦ 	:	¦ 				
296298 Dekalb	0-7	 Very channery loam,	SC-SM	A-4	2-15	115-30	150-90	45-80	40-75
_ 	7-24	extremely stony loam Very channery sandy loam, channery sandy	SC-SM	B-4	o 	5-40	150-85	40-75	140-75
	24-32	Loam Very channery sandy loam, channery sandy	WS -	A-2	0	110-50	45-85	125-75	120-65
	32-36	Loam Unweathered bedrock 	¦ 						
296303 Hazleton	0-5	 Very channery sandy loam, extremely stony		A-4	2-15	 15-50 	160-85	50-80	50-70
	5-31	sandy loam Channery sandy loam,	 SC-SM	 A-4	o 	0-20	160-95	145-90	 35-70
	31-58	silt mery o	GC-GM	A-2	0	5-60	150-80	35-75	25-65
	1 58-69	Toweathered bedrock	¦ 	;		¦ 			-
296304 Holly	0 8-28	Silt loam Very fine sandy loam, silt loam	MI I	A-4 A-4	00	00	90-100 85-100	 85-100 80-10 75-100 70-95	 80-10 70-95
	28-41 41-60 	Loam, silt loam Stratified gravelly Sand to silt loam	MI. SM -	A-4 A-4	00	0-5	85-100 70-100	85-100 75-100 50-95 70-100 65-100 40-90 	50-95 40-90

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	-	Fragn	Fragments	I I	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture 				>10	3-10		sieve	sieve number
			Unified	AASHTO	요	in	in	4	10	1 40
296311	In					Pct	Pct			
Lackawanna	8-0	Channery loam	ME, SM, CL,	A-4, A-2		2-15	15-30	40-100	140-95	35-90
	8-25	y loam,	ML, SM, CL,	A-6, A-4	, A-2	0	0-20	140-80	140-75	35-70
	25-60	Loam, llaggy Loam Channery loam, channery silt loam, very channery loam	ML, SM, CL,	A-6, A-4,	, A-21	0	0-20	50-85 -	40-80	 35-75
Bath	0-8 8-27	 Channery silt loam, Channery silt loam, silt loam, gravelly	SM, ML, GM	A-4, A-2 A-4, A-2,	, A-1	2-15	5-25	55-80 55-95 	50-75 50-90 	 40-75 40-85
	27-60	loam Channery silt loam, very channery silt loam, gravelly sandy	 ML, SM, GC-GM, GM	A-4, A-2,	, A-1	0-2	10-15	130-80	 25-75 	 15-75
	60-64	loam Flaggy loam, channery silt loam, very channery loam	GM, SM, CL-ML, GC-GM	A-4, A-2,	, A-1.	0-2	10-15	130-80	 25-75 	 15-75
296312 Lackawanna	8-0	 Channery loam	SM, CL, GM,	A-4, A-2		2-15	15-30	 40-100 	 40-95	 35-90
	8-25	Channery loam, silt loam, flaggy loam Channery loam, channery silt loam, very channery loam	SM, GC, MI, CI, GM SM, GC-GM, MI, CI, GM	A-4, A-2, A-6, A-4,	, A-61	0 0	0-20	40-80 50-85	40-75 40-80 	35-70 35-75
296313 Lackawanna	8-0	 - Channery loam 	SM, CL, GM,	A-4, A-2		2-15	15-30	 		വ
	8-25 25-60	Channery loam, silt loam, flaggy loam Channery loam, channery silt loam, very channery loam	SM, GC, MI, CI, GM SM, GC-GM, MI, CI, GM	A-4, A-2, A-6, A-4,	, A-6	0 0	0-20	40-80 50-85 	40-75 40-80 	35-70 35-75
296315 Lackawanna	8 0		SM,			2-15	15-30	140-100		135-90
	25-60	Channery loam, Silt loam, flaggy loam Channery loam, channery silt loam, very channery loam	ML, SM, CL, MT, SM, CL,	A-6, A-4, A-6, A-4,	A-2	0 0	0 0 0	20 - 82	- 40-75 - 40-80 - 140-80	35-75 35-75

Table 14.--Engineering Properties--Continued

Map unit symbol	Depth	USDA texture	Classi	Classilication	Frag	ragments	 Ā	Percentage pas sieve number	ge pas number
and soil name	ı	_			>10	3-10			
			Unified	AASHTO	цi	ri ui	 4	10	40
796316	In				Pct	Pct			
Lackawanna	8-0	Channery loam	ML, SM, CL,	A-4, A-2	2-15	115-30	40-100	40-95	135-90
	8-25	Channery loam, silt loam, flaqqy loam	ML, SM, CL, GM	A-6, A-4, A-2	0	0-20	140-80	140-75	35-70
	25-60		ML, SM, CL, GM	A-6, A-4, A-2	0	0-20	50-85	140-80	35-75
 296317 Taidig===================================	١	 	CTMT.		71.7	15 130	 		 45-80
))				1	2 _	8 -	2 -)
	6-33	Gravelly loam, very	SC	A-4	0	5-20	170-95	150-90	40-80
	33-65	loam,	ည	A-4	0-2	5-20	150-90	140-85	130-80
		channery sandy clay loam							
296326 I									
Lordstown	0-7 7-26	ery silt ery silt	ME,		2-15 2-15	10-25 10-25	65-85 65-85		50-75 50-75
	26-30	Very channery silt loam, channery loam,	SM, ML, GM	A-4, A-2, A-1 	0	5-25	40-75 	30-70 	25-70
	30-42	sandy loam Unweathered bedrock			-			¦	
296327	i	:	!	:	,	;	; ;		:
Lords town	7-26	ery silt	ŘŘ		2-15	110-25	65-85 65-85	150-75	50-75 50-75
	26-30	Very channery silt loam, channery loam,	SM, ML, GM	A-4, A-2, A-1 	0	5-25	40-75 	30-70 	25-70
	30-42	Unweathered bedrock	}	;	-				:
296328 Tordetown	0-7	Vorte changes and the	Ę		7 7	10-25	ا ا ا ت	 50_7	 50-75
		n, extreme	1		4	2	8 -	2 _	2 _
	7-26	silt loam Very channery loam,	M.	 A-4	0	 5-10	 65-85	 50-75	 50-75
_		/ channery silt		_		_	_	_	_
	26-30	Very channery silt loam Unweathered bedrock	GM 	A-4	0	5-25	140-75	130-70	25-70
							_		

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Frag	Fragments	-	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture				1 3-10	-	sieve number	number
			Unified 	AASHTO	 ni	– – ni	4	10	1 40
296328	In				Pot	Pct			
Oquaga	0-7	Very channery loam,	GM	A-4	2-15	110-25	150-85	140-70	35-70
	7-30	channery loam,	WS.	A-2	o - - -	110-25	135-70	125-60	120-60
	30-42	very channery silt loam Unweathered bedrock	¦ 	¦ 			¦ 	 	
296329			!						
Mardin	0-8 8-17	Channery silt loam Channery silt loam,	SM, MI, GM GC, SC-SM,	A-4, A-2 A-4	o o 	5-15 5-10	155-80	50-75 55-90	40-75 45-90
_		ravell		_		_	_	_	_
	17-21	Channery silt loam,	IGC, SC-SM,	A-4	o 	5-10	06-091	155-90	45-90
	21-60	Loam, graverry roam Channery loam, channery	IGC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
		silt loam, very	CL-ML						
-	08-09		GC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
		silt loam, very channery silt loam	CL-ML						
296330									
Mardin	0-8	Channery silt loam	SM, MI, GM	A-4, A-2	0	5-15	155-80	150-75	140-75
_	8-17	н		A-4	0	5-10	06-091	155-90	45-90
	7	loam, gravelly loam	CL, CL-ML	_ :			_ 3		- 1
	17-/1	Channery Silt loam,	GC, SCISM,	- W -	> 	01-0	06-09-	08-00-	- 45 - 90 - 90 - 90
	21-60	Loam, graveriy Loam Channerv loam, channerv	I CL, CL-ML	 A-4, A-2, A-1	0	110-25	140-80	135-75	 30-70
		н	-MT		. _ .	. _ .			_
	08-09	channery loam	ַנַע עַנּי	 		110-25	 40	135-75	130-70
	8		Ä	ì		2	S 	2	2
10000									
Mardin	8-0	Very stony silt loam	MI, SM, CL,	A-4, A-2	0-2	3-20	140-100	140-95	 35-90
	8-17	 Channery silt loam,	IGC, SC-SM,	A-4	0	5-10	06-091	155-90	45-90
_		loam, gravelly loam			_	_ ;	_ :	_ :	_ !
	17-21	Channery silt loam, loam. gravelly loam	CL, CL-ML, GC, SC-SM	A-4	o 	1 5-10	06-091	155-90	45-90
-	21-60		IGC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
_			CL-ML						
	08-09	channery Loam Channerv loam, channerv	 GC, SC, CL,	 A-4, A-2, A-1	0	110-25	140-80	 35-75	 30-70
		ry loam	-M-	ì		l L	; - – –	!	:

Table 14. -- Engineering Properties -- Continued

Man truit text	Denth	INSTA TAXATITA	Classif	Classification	Frag	Fragments	Pé	Percentage pas	age pas
and soil name	; ;				>10	3-10			
			Unified	AASHTO	in	ni n	4	10	40
006330	In				Pct	Pct			
Mardin	8-0	Very stony silt loam	ML, SM, CL,	A-4, A-2	0-2	3-20	40-100 40-95 	40-95	35-90
	8-17			A-4	0	5-10	06-091	155-90	45-90
-		loam, gravelly loam			•		_ (
	17-21	Channery silt loam,	CL, CL-ML,	A-4	0	1 5-10	06-091	155-90	45-90
	21-60	graverry TV loam, c		A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
			-MI						
	08-09	Channery loam, channery	GC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
		silt loam, wery channery silt loam	CL-ML						
296335									
Meckesville	6-0	Gravelly loam, gravelly silt loam	MI	A-4	0	0-15	80-100 	02-091	60–65
_	9-36	loam,	ML	A-4	0	0-20	160-100 60-95	60-95	06-09
_	36-60	ery loam, loam	GC-GM	A-4	0	0-20	45-95	40-90	35-85
-	60-64	Very channery loam, loam	loam GC-GM	A-4	0	0-20	145-90	30-85	30-85
296337									
Meckesville	6-0	Gravelly loam, very	ML	A-4	0-5	3-15	180-100 70-95	170-95	65-85
	9-36		ML	A-4	0	0-20	160-100 60-95	160-95	06-09
	36-60	Channery loam, loam	GC-GM	A-4	0-2	0-20	45-95	140-90	35-85
	60-64	nnery loam,	loam GC-GM	A-4	0-2	0-20	145-90	30-85	30-85
296338									
Morris	8 -0 	Channery silt loam 	ML, SM, CL, GM	A-4, A-2	0	0-15	160-95	50-75 	40-75
	8-17	U2	SM, CL	A-4, A-2	0	0-50	160-95	45-80	40-80
		channery loam, channery silty clav							
		1		_		_		_	
	17-70	ທ	SM, CL	A-4, A-2	0	0-20	160-95	45-80	40-80
_ _ .		channery loam, channery silty clay							
	0				c				
	08-07	Channery Silt Loam, channery loam, channery silty clay	SM, CL	A-4, A-2 	>	0 - 0 -	0	24 0 0 0	0.4. 0.0.0.
- -		loam							

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragments	nents	P.	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture				3-10		sieve number	number
		. – –	Unified	AASHTO	ri ni	ni	4	10	1 40
296339	In				Pct	Pct			
Morris	8-0	Extremely stony silt loam, very channery	ĊĹ	B-4	2-15	5-25	160-95	55-85	140-80
	8-17		CI	A-4	2-15	5-25	160-95	55-85 	 40-80
	17-70	silt loam Channery silt loam,	CI	 A-4	0	0-20	160-95	 45-80	 40-80
	70-80	gravelly loam Gravelly loam, channery silt loam	CI	B-4	0	0-20	160-95	145-80	40-80
296340 Morris	8 - 0		CI.	 A-4	2-15	5-25	160-95	 55-85 	 40-80
	8-17	silt loam Extremely stony silt loam, very channery silt loam	CI.	 A-4	2-15	5-25	160-95	 55-85 	 40-80
	17-70	Iy loam, channery ry silt loam,	CI.	A-4 A-4	0 0	0-20	160-95	45-80 45-80	40-80 40-80
296341 Freetown, mucky peat	0-6	at	GP, PT GP, PT	A-1, A-8	0	0			
296342 Paupack, mucky peat (shallow)-	0-3 3-26 26-36 36-70	Mucky peat Muck Very stony muck Extremely stony sandy loam, extremely stony	GW, PT GP, PT GW, PT SC, GM	A-1, A-8 A-1, A-8 A-1, A-8 A-1, A-2	0 1 0 2 0 2 0 0 2 0 0 0 0 0 0 0 0 0 0 0	0-10	0 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -		
296343 Oquaga	0-7 7-30 30-42	Very channery loam Very channery loam Unweathered bedrock	GM SM	A-4 A-2	00	5-20	50-85 35-70 	 40-70 25-60 	 35-70 20-60
Lackawanna	0-8 8-25 25-60	Channery loam GM Channery loam, loam GC Channery loam, silt loam GC		ъ-4 В-4	000	0-15	40-80 40-80 50-85	40-75 40-75 40-80	 35-70 35-70 35-75

Table 14. -- Engineering Properties -- Continued

Merry + intrace	1 4 4	4021	Classi	Classification	Frag	Fragments	<u> </u>	Percentage pas	age pas
and soil name					>10	3-10			
			Unified 	AASHTO	ni ni	ni n	4	10	1 40
296344	In				Pct	Pct			
Oquaga	0-7	Very channery loam	E GW	A-4	00	1 5-20	150-85	140-70	135-70
	30-42	thered be	¦	¦ :	· ¦) 	
 Lackawanna	8-0		I GM	A-4	• 	0-15	140-80	140-75	 35-70
	8-25	Channery loam, loam GC Channery loam, silt loam GC	<u> </u>	A-4 A-4	00	0-20	40-80 50-85	140-75	35-70 35-75
296346									
Oquaga	7-0	Very channery loam,	I GM	A-4	2-15	110-25	150-85	140-70	35-70
	7-30	channery loam,	WS .	A-2	0	110-25	135-70	125-60	20-60
	30-42	very channery silt loam Unweathered bedrock	¦ 	;	¦ 	¦ 	¦ 		:
Lackawanna	8-0	Very channery loam,	- MT	A-4	2-15	115-30	140-100	140-95	 35-90
	8-25	extremely stony loam Channerv loam	<u>၁၅</u>	A-4	0	0-20	140-80	140-75	 35-70
	25-60		IGM	A-4	0-2	0-20	150-85	140-80	35-75
296347									
Oquaga	0-7		l GM	A-4	2-15	110-25	150-85	140-70	35-70
- -	7-30	extremely stony loam Very channery loam,	- SM	A-2	o 	 10-25	135-70	125-60	 20-60
_	30-42	very channery silt loam Unweathered bedrock		;					
	; ? 								
Lackawanna	8-0	Very channery loam, extremely stony loam	MI	A-4	2-15	115-30	40-100 		35-90
	8-25		251	A-4	0	0-20	140-80	140-75	135-70
	25-60	Channery Loam 	ည	A-4	N - 0 -	0-20	150-85	40-80 	35-75
296348 Philo	0-10	 Silt loam	CI-MI	A-4	0	0-5	 95-100	95-100180-100185-90	 85–90
	10-40	Fine sandy loam, silt	SC-SM	A-4	0	0-2	195-100	95-100 75-100 70-90	06-04
_	1 40-60	loam Grave v fine sandv	W.	A – 4	c 	0-5	160-95	 50-90	 40-85
		tratif	<u></u>	r 4	·) - — -	3 2 	2)
296349							:	!	
Pope	0-10	Silt loam Silt loam, fine sandy	CL-ML SM	A-4 A-4	o o	o o	85-100 95-100	85-100 75-100 70-10 95-100 80-100 51-95	70-10 51-95
	30-60	Loamy very fine sand,	NS I	A-4	0	0-20	 45-100	145-100 35-100 30-95	 30-95
- -		sandy Loam 							

Table 14. -- Engineering Properties -- Continued

- Lodense + in: reM	4+40-6	GTITA OF GOTT	Classif	Classification	Fragn	Fragments	Pe	Percentage pas	e pas
and soil name	; 1,				>10	3-10			
			Unified 	AASHTO	i 	in	4.	10	40
296350	In				Pct	Pct			
Роре	0-10 10-30	Silt loam Silt loam, fine sandy	CL-ML SM	A-4 A-4	00	00	85-100 75-100 70-10 95-100 80-100 51-95	75-100 70-10 80-100 51-95	70-10 51-95
	30-60	Loam very fine sand, sand, sandy loam	SM	A-4	0	0-20	45-100 35-100 30-95 	35-100	30-95
296351 Rexford, somewhat									
poorly drained-	8-0	Silt loam	SC, SM, CL,	A-4, A-2	0	0-2	 95-100 80-100 75-95 	80-100	75-95
	8-18	Gravelly sandy loam, loam sil+ loam	SM, MI, GM	A-4, A-2	0	0-10	60-100 50-100 40-85	50-100	40-85
	18-40		SM, ML, GM	A-4, A-2	0	0-10	60-100 50-100 40-85 	50-100	40-85
	40-63	Stratified gravel, very gravelly sandy loam	SP, SP-SM, GP-GM, GW	A-2, A-1	0	0-20	140-55	30-50	10-40
Rexford, poorly drained	0-8	Silt loam	SC, SM, CL,	A-4, A-2	0	0-5	195-1001	80-100	75-95
	8-18	Gravelly sandy loam, loam sil+ loam	ML SM, ML, GM	A-4, A-2	0	0-10	60-100	 50-100 40-85 	40-85
	18-40		SM, ML, GM	A-4, A-2	0	0-10	60-100	50-100 40-85 	40-85
	40-63	Stratified gravel, very gravelly sandy loam	SP, SP-SM, GP-GM, GW	A-2, A-1	0	0-20	140-55	30-50	10-40
296355						L			r L
Sherrield	0-7 7-19	Silt Loam Silty clay loam, silt	<u> </u>	A-4 A-6	00	0 - 5	95-100 95-100	90-100 90-95 -	85-10 85-95
	19-38	Silty clay loam, silt loam	CI	A-6	0	0-5	95-100	90-95	85-95
	38-66	Very channery silty clay loam, silt loam 	<u>घ</u>	A-6	0	0-5	185-95	80-95	75-90

Table 14. -- Engineering Properties -- Continued

			Clas	Classification	Fragm	Fragments	Pe	Percentage pas	ge pas
Map unit symbol	Depth	USDA texture			· 		_	sieve number	number
and soil name		_			710	3-10			
			Unified	AASHTO	ni I	in	4	10	1 40
296363	In				Pct	Pct			
Dystrochrepts, very stony	9-0	 Very channery loam	SM, ML, GM	 A-4, A-2	0-5	5-15	 60-85	 50-80	I 50-70
	6-32	Very channery silt			0	0-20	160-95	145-90	135-70
		, channery	掘						
		very channery loam	į					1	7
	32-56	Extremely channery loam, very channery	SC, SM, GC, GM	A-4, A-2, A-1 	 -	2-60	08-06	35-75 	Z5-65
_		silt loam, very		_	_		_	_	_
_	,	channery loam		_					_
	26-60	Unweathered bedrock	!	<u> </u>	 		<u> </u> 	¦ 	<u> </u>
1 296369									
Wayland	6-0	Silty clay loam	ML	A-5	- 0	0	100	95-100 90-10	90-10
_	9-41	Silty clay loam, silt	ML	A-4	- 0	0	100	95-100 90-10	190-10
_		loam		-	_		_	_	_
_	41 - 60	Very gravelly loam,	CĽ	A-4	- 0	0	65-100	65-100 55-100 50-95	150-95
		stratified silt loam							
1 296376									
Wellsboro	0-8	Channery loam	SM, CL, GM,	A-4, A-2	2-15	15-30	140-100 40-95	140-95	135-90
_		_	¥		_		_	_	_
_	8-17	Channery loam, channery		A-4, A-2	- 0	0-15	170-100	70-100 60-100 55-95	55–95
		silt loam, gravelly	CL-ML, GC-GM	- WE					
-	17-21	Toam channery	MT.	A - 4 A - 2	c	0-15	170-100	70-100160-100155-95	 55-95
	1		CL-ML, GC-GM	ì ! _	· _)	2 -	2 -	? ? -
_		loam	•	· -	_		_		_
_	21-60	Very channery loam,	ML, SM, CL,	A-4, A-2	- 0	0-20	155-90	145-90	135-80
_		channery sandy loam,	GM.	_	_		_	_	_
_		channery silt loam		_	_		_	_	_
_	08-09	11t	MI, SM, CL,	A-4, A-2	- 0	0-20	155-90	145-90	35-80
		channery	W.						_
		loam, channery loam							
_		_		_	_		_	_	_

Table 14. -- Engineering Properties -- Continued

			Classif	Classification	Frag	Fragments		Percentage pas	je pas
and soil name	nepun	OSDA CEXCUTE			>10	3-10		sieve number	ımıner
_ _			Unified 	AASHTO	ni n	ni -	4	10	40
296379	In				Pot	Pot			
Wellsboro	8-0	Channery loam	SM, CL, GM,	A-4, A-2	2-15	115-30	40-100 40-95	140-95	35-90
- 	8-17	Channery loam, channery silt loam, gravelly loam	SM, -ML, GC-GM	A-4, A-2	0	0-15	170-100	70-100 60-100 55-95	55-95
- 	17-21	Channery loam, channery silt loam, gravelly	MI, SM, CL-MI, GC-GM	A-4, A-2	o	0-15	70-100	70-100 60-100 55-95 	155-95
_ - -	21-60	chann	MI, SM, CI,	A-4, A-2	o 	0-20	55-90	145-90	35-80
	08-09	channery silt loam Very channery silt loam, channery sandy loam, channery loam	ML, SM, CL, GM	A-4, A-2	o 	0-20	155-90	145-90	35-80
296385 Wyoming	0-7	Gravelly sandy loam	SM, GM,	A-3, A-2, A-1	o 	0-15	140-90	30-80	110-60
_ _ .	7-25	Gravelly sandy loam,	SM SP-SM, GM, GP-GM	A-3, A-2, A-1	o 	0-25	140-75	135-70	5-55
	25-60	Loam Extremely gravelly loamy coarse sand, very gravelly sand, gravelly sandy loam	SM, SW, GP-GM, GW	A-1	o 	5-30	130-65	20-55	5-50
296386 Wyoming	0-7	Gravelly sandy loam	SP-SM, GM,	A-3, A-2, A-1	0	0-15	140-90	30-80	110-60
	7-25	Gravelly sandy loam, very gravelly sandy	SP-SM, GP-GM	A-3, A-2, A-1	o	0-25	140-75	35-70	5-55
	25-60	Extremely gravelly Loamy coarse sand, very gravelly sand, gravelly sandy	GP-GM, GW, SM, SW	A-1	0	5-30	30-65	20-55	5-50

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragi	Fragments		Percentage pas	ge pas
Map unit symbol and soil name	Depth 	USDA texture			>10	3-10	-,-	sieve number	number
			Unified	AASHTO	in	ni n	4	10	1 40
296387	In				Pct	Pct			
Wyoming	0-1	Gravelly sandy loam	SP-SM, SW-SM, GM, SM	A-3, A-2, A-1	0	0-15	140-90	130-80	110-60
- 	7-25	Gravelly sandy loam, very gravelly sandy	SM, SP-SM, GM, GP-GM	A-3, A-2, A-1	0	0-25	140-75	135-70	5-55
	25-60	Extremely gravelly loamy coarse sand, very gravelly sand, gravelly sand,	GP-GM, GW, SM, SW	A-1	0	5-30	30-65	120-55	5-50
296388 Wyoming	0-7	Gravelly sandy loam	SP-SM, SW-SM, GM, SM	A-3, A-2, A-1	0	0-15	140-90	130-80	110-60
- 	7-25	Gravelly sandy loam, very gravelly sandy loam	SM, SP-SM,	A-3, A-2, A-1 	0	0-25	140-75	135-70	5-55
	25-60	Extremely gravelly loamy coarse sand, very gravelly sand, gravelly sand,	GP-GM, GW, SM, SW	A-1	0	5-30	30-65	120-55	5-50
296389 Wyoming	0 - 8 8 - 26	Very gravelly sandy loam SM Very gravelly sandy GM loam, gravelly sandy	SM	A-1 A-1	0 0	0-15	40-90 40-75	30-80 35-70 	 10-60 5-55
	26-60	ified sand to very blly loamy sand, gravelly silt loam	GP-GM	A-1	0	5-30	30-65	120-55	5-50
297185 Edgemere	0-2	 Extremely stony mucky	- F4	- IA-8	0	0	0	100	
	2 - 5	peat Extremely stony loam, extremely stony silt	 OL, SM, GM, ML	A-7, A-5	10-30	5-25	170-90	65-85	 60-80
	5-24	Loam Very stony loam, very stony sandy loam	SM, CL, GM,	A-4	5-20	5-20	165-95	165-90	 60-85
	24-66		SC-SM, SC,	A-4, A-2	1-5	110-25	06-09	155-70	35-70

Table 14. -- Engineering Properties -- Continued

 	Denth	USDA texture	Classi	Classification	Frag	Fragments	Ă	Percentage pas	ge pas
and soil name	; ; ;				>10	1 3-10			
- -			Unified	AASHTO	ni n	ni -	4	10	1 40
297185	In				Pct	Pct			
Shohola	0-3	Very flaggy loam	SM, CL, GM,	A-6, A-4	5-20	115-35	170-90	65-85	60-80
	3-24	Very flaggy loam, extremely flaggy silt loam, extremely flaggy fine sandv loam	SM, CL, ML, CL-ML, GM	A-6, A-4	1-5	0-15	65-95 	165-90	60-85 -
	24-72	laggy very loam	SC, SC-SM, CL-ML, GC	A-4, A-2	1 - 5	110-25	06-091	155-70	35-70
297186 Edgemere	0-2	 Extremely stony mucky	PT	A-8	10-20	5-12	5-10	100	
	2 - 5	<pre> peat Extremely stony loam, extremely stony silt loam</pre>	OL, SM, GM,	A-7, A-5	110-30	5-25	 70-90 	 65-85 	 60-80
	5-24	Very stony loam, very	SM, CL, GM,	A-4	5-20	5-20	165-95	165-90	60-85
	24-66	Very gravelly sandy loam, very gravelly loam	SC-SM, SC, CL-ML, GC	A-4, A-2	1-5	110-25	06-091	155-70	35-70
297188 Manlius	0 - 5	 	GM. GC-GM	 	0-1	110-25	145-55	140-50	 30-50
	5-24	channery silt , very channer	GW-GM, GM,	A-2,		110-25	125-60	120-55	115-55
	24-30	Very channery silt loam, extremely channery loam	GW-GM, GM, GC-GM	A-4, A-2, A-1 	0-1	110-25	115-60	10-55 	5-55
	30-40	Unweathered bedrock	¦						
Arnot	3-14	Very channery loam Very channery silt loam, very channery	SM, ML, GM GM	A-5, A-4, A-2 A-4, A-2, A-1	A-2 25-55 A-1 0	115-30	130-60	125-80	120-55
- 	14-24	Toweathered bedrock 				¦ 	:		

Table 14. -- Engineering Properties -- Continued

	-		Classi	Classification	Frag	Fragments	l Pe	Percentage pas	ye pas
Map unit symbol and soil name	Depth 	USDA texture 			>10	3-10		sieve number	number
			Unified	AASHTO	in	ni n	4	10	40
207180	In				Pct	Pct			
Manlius	0-5		GM, GC-GM	A-4, A-2, A-1	0-1	110-25	145-55	40-50	30-50
	0 1 2 1	Very channery silt loam, very channery loam, very channery loam	GC-GM	A-6,	>	6 7 1 0 T 1	091	000	0 0 1 0 1
	24-30	占	GW-GM, GM,	A-4, A-2, A-1	0-1	110-25	115-60	10-55	5-55
		loam, extremely channery loam	を 1000 - 1000						
	30-40	Unweathered bedrock 		:	 	¦ 	 		-
Arnot	0-3	channery	SM, ML, GM	A-4,	25-55	115-30	160-85	55-80	45-80
	3-14	Very channery silt loam, very channery	₩5	A-4, A-2, A-1 	>	110-25	09-08-	44-42	44-07 -
	14-24	Loam Unweathered bedrock	¦ 		!				-
297190				·	•				
Braceville	0-11 11-27		SC-SM, SM, ML SC-SM, SM, ML	ML A-4 ML A-4	00	0-1	95-100 95-100	90-100 80-95 80-100 40-80	80-95 40-80
		gravelly fine sandy loam							
	27-48	Fine sandy loam	SC-SM, SM, ML	A – 4 A – 4	00	0-5	180-1001	80-100 70-100	06-09
_	: :		<u> </u>		•	· - –			
297191 Wvalusing	9 1 0	 Fine sandv loam	SM: MT.	- 4 - 4	c	0-5	195-1001		70-10
	6-31	fine		A-4, A-2	0-1	115-25	180-100		40-70
	31-70	gravelly loam	- No		ر ا	1 5 5 5	-		120-40
	2	yery colly loam, fine gravelly loam, fine sandy loam		77.4					0 † 1 0 N
297192									
Pope	9-0	Fine sandy loam	SC-SM, SM,	A-4, A-2	0	o . _ .	185-100	75-100	51-85
	6-33	 Fine sandy loam, sandy	CL-ML, ML SC-SM, SM,	 A-4, A-2	0	0	 95-100	 	51-95
	_	æ	_	_		_	_	_	
	33-70	Sandy loam, loamy sand	SC-SM, SM, GM, ML	A-4, A-2, A-1 	0	0-15	45-100 	35-100	130-95
297193									
Paupack	ω-0 -	Mucky peat	GW, PT	A-1, A-8	0 1	0 6	o 	 -	
	26-36	Muck Verv stonv muck	GW, PT	A-1, A-6 A-1, A-8	0 0	0 0	0	 	
	36-70				1-5	5-10	140-90	40-60	30-40

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragi	Fragments	ĬĀ.	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture			>10	3-10		sieve number	number
			Unified	AASHTO	in	ri ui	4	10	1 40
297196	In				Pct	Pct			
Freetown	0-6	 Mucky peat Muck, mucky peat	GP, PT GP, PT	A-1, A-8 A-1, A-8	0	° ¦			
297197 Manlius	0 - 5 5 - 24		 SM, ML, GM GW-GM, GM, GC-GM	 A-4, A-2 A-4, A-2, A-1	1 - 5	5-25 110-25	 55-75 25-60 	 50-70 20-55	 35-60 15-55
	24-30	loam loam loam loam extremely channery loam channery loam	GW-GM, GM, GC-GM	A-4, A-2, A-1	0-1	110-25	115-60	110-55	5-55
297198 Manlius	30-40	thered be channery		. A.	1 1	2 2 2 1	155-75	50-70	135-60
	5-24	channery 1, very ch 1		A-2,	o ,	10-25	72 - 60	20 0 20 0 20 1	15-55 -
	24-30 30-40	Very channery silt loam, extremely channery loam Unweathered bedrock	GW-GM, GM, GC-GM 	A-4, A-2, A-1 	0 -1	10-25	15-60	10-55	G G I I I
297201 Oquaga	0-2 2-26 26-32	 Very channery loam Very channery silt loam, very stony loam Extremely stony sandy loam, very channery	SM, MI, GM IMI, SM, GC-GM, GM GC-GM, GM, MI, SM	A-5, A-4, A-2 A-4, A-2, A-1 A-4, A-2, A-1	1-5 1-20 0-15	10-20 110-25 110-45	50-85 35-70 35-70	40-70 25-60 25-60	35-70 20-60 20-60
	32-42	loam Unweathered bedrock	¦ 		-		:		
297203 Delaware	0-14 14-48 48-72	Fine sandy loam Fine sandy loam, very fine sandy loam Fine sandy loam, loamy fine sand, loamy sand	SM, ML SM, ML SM, ML	В-4 В-4 В-4, В-2	00 0	0-1	100 199-100 195-100	95-100 75-95 95-100 70-90 95-100 80-95	75-95 70-90 80-95
297204 Delaware	0-14 14-48 48-72	Fine sandy loam Fine sandy loam, very Fine sandy loam Fine sandy loam, loamy fine sand, loamy sand	SM, MI. SM, MI. SM, MI.	A-4 A-4 A-4, A-2	00 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100 100 99-100 95-100		75-95 70-90 80-95

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragments	nents	Perc	Percentage pas	pas
Map unit symbol	Depth	USDA texture					. –	sieve number	mber
and soil name		_		_	>10	3-10			
			Unified	AASHTO	– – ri	ri u	 4. 	10	40
1	In				Pot	Pct			
Delaware	0-14	loam	SM, ML	A-4	00	0 -	100 95-100 75-95	-1001	75-95
	14-48	Fine sandy loam, very fine sandy loam	SM, ML	- H - 4	 	T - -	- 66 00 T - 66 1	- T 0 0 T - 0	08-07
	48-72	Fine sandy loam, loamy fine sand, loamy sand	SM, MI	A-4, A-2 	 o	0-2	95-100 95-100 80-95 	-1001	30-95
297209 Philo	9-0	 - Loam	MI, CI-MI	 	 0	0-5	 	-1001.	75-90
	6-36	Silt loam, loam, fine		A-4		0-2	195-100 75-100 70-90	-1001-9	06-02
	36-70	Sandy loam Stratified sand to very gravelly sandy loam	ML, SM, CL-ML, GM	A-2-4, A-2, A-1	0 - 7	0-5	45-95 40 	40-90	120-70
297210									
Barbour	0-10	Fine sandy loam	SC-SM, SM, CL-ML, ML	A-4, A-2 	 0	0	80-100 75 	75-100 !	50-95
_	10-38	oam, fine	SC-SM, SM,	A-4, A-2, A-1	0	0	60-100 55-95		30-95
	20-72	, grav	CL-ML, ML	ا د د		<u></u>	 25_05 20	 20_0E	00-00-
	2000	cobbly land sand, very cobbly loamy sand, cobbly sand	, A	A-1, A-2	·	n 5			
297216							 		
Wurtsboro	0-4	Stony fine sandy loam -	SM, SC-SM, GM, ML	A-4, A-2 	115-20	3-5	70-100 65 	65-90 E	55-90
_	4-22	/ loam		A-4, A-2	0-2	0-15	170-95 55	25-90	45-85
		gravelly fine sandy loam, channery loam							
	22-70	Gravelly fine sandy loam, fine sandy loam,	SM, GM	A-4, A-2, A-1 	- 0 - 2 - 0	0-20	50-95 35 	35-90	30-80
		very gravelly fine sandy loam, channery							
		loam							
297217					_				
Wurtsboro	0-4	Stony fine sandy loam Fine sandy loam,	SM, ML, GM SM, GM	A-4, A-2 A-4, A-2	15-20 0	3-5 0-15	70-100 65 70-95 55	65-90 1 55-90 1	55-90 45-85
		elly fine s		· ·					
	22-70	loam, channery loam	SM. GM	 A-4. A-2. A-1		0-20	 50-95 35	35-90	30-80
	<u>:</u>	loam, fine sandy loam,		ì				_	
		very gravelly fine sandw loam channerw							
_		l loam							
_		_		_	_	_	_	_	

Table 14. -- Engineering Properties -- Continued

Me West	4	Carried AGNI	Classi	Classification		Fragi	Fragments	A -	Percentage pas	ge pas
and soil name	i de la companya de l			_		>10	3-10		ש א א א	
			Unified	AASHTO		in	ni n	4	10	40
700700	In					Pct	Pct			
Arnot	0-3	Very channery loam	GM	A-4, A-5,		0	110-25	130-60	125-55	20-55
	3-10	Very channery silt loam, very channery	GM	A-1, A-2 A-4, A-2, 	, A-1	0	110-25	130-60	 25-55 	 20-55
	10-14	Loam Extremely channery loam, very channery	GM -	A-4, A-2,	, A-1	0	110-25	130-60	125-55	 20-55
	14-24	Loam Unweathered bedrock 	;	:		!				
297228 Arnot	0 – 3	 Very channery loam	GM	 A-4, A-5, a-1 a-2		0	110-25	130-60	25-55	 20-55
	3-10	Very channery silt loam, very channery	WB		, A-1	0	110-25	130-60	125-55	20-55
	10-14	loam Extremely channery loam, very channery	GM -	 A-4, A-2, 	, A-11	0	 10-25 	130-60	 25-55 	 20-55
	14-24	Loan Unweathered bedrock 	;	: 		-				
297229 Wyoming	0 - 3	 Very cobbly sandy loam	SM, SW-SM,	 A-3, A-2,	, A-1	0	120-40	140-90	130-80	110-60
	3-33	Very cobbly sandy loam,	SM, SP-SM, SM, SP-SM, GM, GP-GM	A-3, A-2,	, A-1	0	125-40	140-75	35-70 	5-55
	33-72	Loam Extremely cobbly loamy coarse sand, very gravelly sand, gravelly sandy loam	SM, SW, GP-GM, GW	- 1		0 - 5	140-60	30-65	120-55	5-50
297230 Wyoming	0 - 3	 Very cobbly sandy loam	SM, SW-SM,	 A-3, A-2,	, A-1	0	120-40	140-90	130-80	10-60
	3-33	Gravelly sandy loam, very cobbly fine sandy loam, very gravelly	GM, GP-GM GM, GP-GM GM, GP-GM	 A-3, A-2, 	, A-1	0	0-25	140-75	35-70	5-55
	33-72	loam loam ely co sand lly sa	SM, SW,	- B-1		0 - 5	140-60	130-65	120-55	5-50

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fraç	Fragments	Ā	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture 			>10	1 3-10		sieve number	number
			Unified	AASHTO	in	i di	4	10	40
	In				Pct	Pot			
Z9/Z31 Wyoming	0-3	 Very cobbly sandy loam	SM, SW-SM,	 A-3, A-2, A-1	0	120-40	140-90	130-80	 10-60
	3-33		GM, GP-GM	 A-3, A-2, A-1	0-1	120-40	140-75	135-70	 5-55
		, cobbly							
	33-72	sandy loam Extremely cobbly loamy		- A-1	0-5	140-60	130-65	120-55	5-50
 -		coarse sand, very gravelly sand, gravelly sandy loam	GP-GM, GW						
297236	0-10	- Juneo. I	×		c	c 	 95-100	 85-100	
400	10-70		ISP, SM	A-2, A-2, A-1	0	o o	60-100 60-100	60-100 45-100 20-85	
297237 Mandin	α I C	 - 	Σ	7 - A	c	 	 65_75	1 60-70	 50-70
Warain-land	0	Chambery Silt loam 	GC GL,	 	>	0 N	67-69-	0/1091	0/1001
	8-17	ry silt lo	GC, SC-SM,	A-4	0	1 5-10	06-091	155-90	45-90
- -	17-21	Loam, Channery Loam Channery silt loam,	GC, SC-SM,	B-4	0	5-10	06-091	155-90	 45–90
_		>	, CL			_	_	_	_
	21-30	Channery loam, channery	IGC, SC, CL,	A-4, A-2, A-1 	0	110-25	140-80	35-75 	30-70
- -									
	30-60	Very channery loam,	GC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
- -	60-80	loam,	IGC, SC, CL,	A-4, A-2, A-1	0-1	110-25	140-80	35-75	30-70
		silt loam, very	CL-ML						
297238 Mardin	8-0	 Channery silt loam	 GM, ML, CL,	 A-4	0	1 5-20	 65-75	 60-70	 50–70
	7		Ç	_ :	c		- 6		
_	/ T _ 0	Loam, channery loam	GC, SC-SM,	*	>	01-6	06-09-	0 0 0 0	- 45 - 90 - 90 - 90
	17-21	Channery silt loam,		A-4	0	1 5-10	06-091	155-90	45-90
	21 - 30	Loam, channery Loam	CL, CL-ML	 	c	110-25	0 0 0	1 25-75	1 30 - 70
	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	silt loam, very			•			n n n n n n n n n n n n n n n n n n n	
- -	30-60	toduni ery]	GC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
	00-09	silt	Ä		-	110-25	- C	 35_75	1 30-70
	000	channery loam, channery silt loam, very	CL-ML		i o	67-01-	0 0 1	0/100	0/100
- -		cnannery roam 							

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragn	Fragments	Pe	Percentage pas	Je pas
Map unit symbol and soil name	Depth	USDA texture 			>10	3-10		sieve number	number
			Unified	AASHTO	in	ri n	4	10	40
00000	In				Pct	Pct			
Mardin	8-0	Stony loam	GM, ML, CL,	A-4	10-20	5-10	65-75	02-09	50-70
- -	8-17	 Channery silt loam,	I GC, SC, CL,	 A-4	5-15	5-10	06-091	55-90	45-90
_		loam, channery loam	-ML			_ ;		-	
	17-21	Channery silt loam,	IGC, SC, CL,	A-4	5-15	5-10	06-09	55-90	45-90
_	21-30	Loam, channery Loam Channerv loam, channerv	GC, SC, CL,	 A-4, A-2, A-1	0	10-25	140-80	35-75	30-70
_			Ä					-	
_		channery loam	_	_	_	_	_	_	
	30-60	Very channery loam,	IGC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
_		channery silt loam	CI-MI		_	_	_	_	
_	08-09	Channery loam, channery	IGC, SC, CL,	A-4, A-2, A-1	0-1	110-25	140-80 I	35-75	30-70
		silt loam, very	CL-ML						
_		channery Loam 							
297240				_			_		
Mardin	8-0	Stony loam	GM, ML, CL,	A-4	10-20	5-10	65-75	02-09	50-70
_		_	ე	_	_	_	_	_	
_	8-17	Channery silt loam,	IGC, SC, CL,	A-4	5-15	5-10	06-091	22-90 l	45-90
_		loam, channery loam	ÄŢ	_	_	_	_	_	
_	17-21	Channery silt loam,	IGC, SC, CL,	A-4	5-15	5-10	06-091	22-90 l	45-90
_		->-	-ML		_	_	_	_	
_	21-30	Channery loam, channery	IGC, SC, CI,	A-4, A-2, A-1	0	110-25	140-80	35-75	30-70
_		silt loam, very	CI-MI	_	_	_	_	_	
_					_	_	_	_	
_	30-60		IGC, SC, CL,	A-4, A-2, A-1	0	110-25	140-80 I	35-75	30-70
_			ÄŢ			_	_	_	
_	08-09	Channery loam, channery	IGC, SC, CI,	A-4, A-2, A-1	0-1	110-25	40-80	35-75	30-70
_		silt loam, very	CL-ML				_	_	
		channery loam 							
297241								-	
Unadilla	0-13		CL	IA-4	0 (0 (1000	100	100
	49-80	Silt loam	ICL, ML, CL-ML A-4	A-4 b-4	 - c		000	100	100
	2		Ì		· -	· _	2	2)

Table 14. -- Engineering Properties -- Continued

Man truit compos	Denth		Classif	Classification	Frag	Fragments	ĬĀ.	Percentage pas	ge pas
and soil name	; ; ;				>10	3-10)	
			Unified	AASHTO	in	ni	4	10	40
297242	In				Pct	Pct			
Shohola	0-3	Extremely flaggy loam	SM, CL, GM,	A-6, A-4	5-20	15-35	170-90	65-85	160-80
_	3-24	loam,	CL, ML,	A-6, A-4	1-5	0-15	165-95	1 65-90	1 60-85
		extremely flaggy loam, extremely flaggy fine sandy loam, extremely flaggy silt loam	CL-ML, GM 						
	24-72	Very gravelly fine sandy loam, very gravelly loam, very	SC, SC-SM, CL-ML, GC	A-4, A-2	1-5	110-25	06-091	155-70	35-70
		gravelly sandy loam, very flaggy fine sandy							
Edgemere	0-2	Extremely stony mucky peat	GW, PT	A-8	0	0	o 	100	
	2-2	Extremely stony loam, extremely stony silt loam	OL, SM, GM, ML	A-7, A-5	10-30	5-25	170-90	65-85	08-091
	5-24	Very stony sandy loam, extremely stony loam	SM, CL, GM,	A-4	5-20	5-20	165-95	165-90	60-85
	24-66	lly sar y grave	SC-SM, SC,	A-4, A-2	1-5	110-25	06-091	55-70 	35-70
297243									
Shohola	0-3	Extremely flaggy loam 	SM, CL, GM,	A-6, A-4	5-20	115-35	70-90 	65-85 	60-80
	3-24	Very flaggy loam, extremely flaggy loam, extremely flaggy fine sandy loam, extremely flaggy silt loam	SM, CL, ML, CL-ML, GM	A-6, A-4	1-5	0-15	65-95	65-90	60-85
	24-72	Very gravelly fine sandy loam, very gravelly loam, very gravelly sandy loam, very flaggy fine sandy loam	CL-ML, GC	A-4, A-2	1 - 5	110-25	06-09	155-70	35-70

Table 14. -- Engineering Properties -- Continued

Map unit symbol	Depth	USDA texture	Classi	Classification	Fragn	Fragments	<u></u>	Percentage pas sieve number	ge pas
and soil name	•				>10	3-10			
			Unified 	AASHTO	i 	ni n	 4	01	1 40
297243	In				Pct	Pct			
Edgemere	0-2	Extremely stony mucky	GW, PT	8-8	0	0	o . <u>-</u> -	100	¦
	2-5	Extremely stony loam, extremely stony silt	OL, SM, GM,	A-7, A-5	10-30	5-25	170-90	65-85 	 60–80
	5-24	sandy	I SM, CL, GM,	 A-4	5-20	 5-20	 65-95	 65-90	 60-85
	24-66	extremely stony loam	MI.		ا د	10-25	- 09 I	 55_70	 35-70
	0 	loam, very gravelly	•	_	_ _) - -			
297244					_				
Lordstown	0-3		SM, ML, GM	A-4	0-1	120-40	165-85	150-75	150-75
	3-28	Gravelly fine sandy loam, channery loam	MT,	- - 4	- -	01-6	- 69-89	6/-06	c/-0c
	28-30	sily lo	SM, MI, GM	A-4, A-2, A-1	0	5-25	40-75 	130-70	25-70
	30-40	gravelly sandy loam Unweathered bedrock	¦ 				¦ 	¦ 	
Swartswood	0-4		ML, GM	A-2,	5-15	5-20	06-091	150-85	130-80
	4 - 32	Channery loam, rlaggy sandy loam, channery fine sand: loam	ISM, ML, GM	A-4, A-2, A-1 	 - - -	S - 0	000	06-06-	30-85
	32-70	ravelly	MI, SM, GM,	A-4, A-2, A-1	0-1	5-25	150-80	135-80	120-70
		sandy loam, traggy sandy loam, channery loam	M5 _						
297247					- -				
Chenango	0-10 10-29	Gravelly fine sandy loam Gravelly fine sandy loam, verv gravelly	SM, MI SM, GM	A-2-4, A-1 A-2-4, A-1	0-1	0-5	60-90 55-80 	55-80 35-75 	40-80 30-75
· <u></u>	29-70	fine sandy loam Extremely cobbly loamy		A-1	5-10	10-25	130-65	115-45	7-40
		coarse sand, very gravelly loamy coarse sand, extremely gravelly loamy coarse	GP-GM, GM -						
					- -				

Table 14. -- Engineering Properties -- Continued

	1		Classi	Classification	Fragi	Fragments	<u>-</u>	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture			>10	3-10	-,-	sieve number	numper
			Unified	AASHTO	in	ri u	4	10	1 40
297248	In				Pct	Pct			
Chenango	0-10 10-29	Ly fir Ly fir	MI. GM	A-2-4, A-1 A-2-4, A-1	0-1	0-5	160-90	55-80 35-75	40-80 30-75
	29-70	loam, very gravelly fine sandy loam Extremely cobbly loamy coarse sand, very gravelly loamy coarse sand, extremely	GW-GM, GP-GM, GM		5-10	110-25	30-65	 15-45 	7-40
		gravelly loamy coarse sand							
297249 Chenango	0-10	 Gravelly fine sandy loam	SM, ML	 A-2-4, A-1	0-1	0-5	06-091	155-80	140-80
	10-29	fine sandy ery gravelly	SM, GM	A-2-4, A-1	0 - 5	0-10	155-80	135-75	130-75
	29-70	Inne sandy loam Extremely cobbly loamy coarse sand, very gravelly loamy coarse	GW-GM, GP-GM, GM	A-1	5-10	110-25	30-65	115-45	7-40
		sand, extremely gravelly loamy coarse sand							
297253 Craigsville	0 - 5	Very gravelly loam	SM, SC-SM, SC, CL-ML,	A-4, A-2	2-15	0-25	65-90	 60-85 	 40-75
	5-27		ML SM, SC-SM, SC, GC, GM	A-4, A-2, A-1	0	125-60	150-80	30-65	 25-60
	27-77	gravelly sandy loam Very gravelly loamy sand, very gravelly sandy loam, extremely cobbly loamy sand	ам, вс-вм, вс	GC A-2, A-1	0	135-75	35-55	130-50	20-45
Wyoming	0-3	 Very cobbly sandy loam 	SM, SW-SM,	 A-3, A-2, A-1 	0	110-40	140-90	130-80	110-60
	3-33	Very cobbly fine sandy loam, gravelly sandy loam, very gravelly		A-3, A-2, A-1	0	0-25	140-75	35-70	5-55
	33-72	sandy loam Extremely cobbly loamy coarse sand, very gravelly sand, gravelly sand,	SM, SW, GP-GM, GW	A-1	0 R	5-30	30-65	120-55	5-50

Table 14. -- Engineering Properties -- Continued

Man tinn deM	Tool h	- ISDA textite	Classification	uo	Fragi	Fragments		Percentage pas	age pas
and soil name	; d				>10	3-10)) 1	
			Unified A	AASHTO	in	ni	4	10	1 40
298049	In				Pct	Pct			
Wurtsboro, extremely stony	0-2	 Slightly decomposed	 PT A-8		0	0	100	100	100
	2-3	plant material			c		187-100		 61 _ 90
	3-5	Loam Fine sandy loam, loam	-SM A-6,	A-2-4, I	00	o o	187-100	87-100 73-100 57-95	61–90 57–95
			A-4						1
	9-2-	Loam, fine sandy loam 	CL, SM, SC-SM A-6, 7	A-2-4,	0	o 	173-100	73-100 73-100 57-95 	57–95
	6-18	Sandy loam, loam, fine		A-1-b,	0	0	150-100	50-100 50-100 33-87	33-87
	_		A-2-4	4			_	_	_
	18-24	Gravelly sandy loam,	-GM, A-6,	A-1-a,	0	0	119-100	19-100 19-100 12-87	112-87
	_	loam, fine sandy loam	-SM A-1·	- Р			_	_	_
	24-30	Gravelly sandy loam,	-GM, A-6,	A-1-a,	0	0	124-75	124-75	116-65
	_	loam, fine sandy loam		4			_	_	_
	30-60	Gravelly sandy loam,	ISC-SM, IA-6,	A-2-4,	0	0	133-87	133-87	122-75
	_	loam, fine sandy loam	GP-GM, SC A-1-a	е .			_		_
298050									
Wurtsboro,				_			_		_
extremely stony	0-2	Slightly decomposed	PT A-8	_	0	0	100	100	100
		nt mate	į		-	-	1		
	2-2	sandy Loam	SM, SC-SM A-Z-4	, A-4	> 0	o	187-100	8/-100 /4-100 59-93	שושרו מיונים מיונים
	λ 1-2	Fine sandy Loam, Loam 	CL, SM, SC-SM A-6, 1 A-4	A-Z-4,	>	> 	00T-/81	816 001-8/-001-/8	5 / - Y5
	4-6	Loam, fine sandy loam		A-2-4,	0	0	173-100	73-100 73-100 57-95	57-95
	_						_	_	_
	6-18	Sandy loam, loam, fine	SC-SM, GM, CL A-6, i	A-1-b,	0	0	150-100	50-100 50-100	133-87
	_	sandy loam	A-2-	4			_	_	_
	18-24		-GM, A-6,	A-1-a,	0	0	119-100	19-100 19-100 12-87	112-87
	_	loam, fine sandy loam	SM A-1	_ م			_	_	_
	24-33		-GM, IA-6,	A-1-a,	0	0	124-75	124-75	116-65
	_	loam, fine sandy loam	-SM A-2-	4		_	_	_	_
	33-60	ly sar	-GM, A-6,	A-1-a,	0	0	133-87	133-87	122-75
	_	loam, fine sandy loam	SC-SM A-2-4	4		_	_	_	_
	_	_	_	_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

	:		Classit	Classification	Fragn	Fragments	- A	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture			>10	3-10		sieve number	number
			Unified	AASHTO	i i	i di	4	10	40
98050	In				Pct	Pct			
Swartswood, extremely stony	0-1	 Slightly decomposed	 PT	 A-8	 o	o 	100	100	100
	1-2	plant material Loam	 ML, GC-GM, CL	 CL A-6, A-2-4,	 •	°	 57-97	157-97	I 47-87
	2-3	 Sandy loam, fine sandy	 CL, SC-SM, GM	A-4 GM A-6, A-1-b,	 0	0	 59-97	159-97	 46–92
_	3-4	loam Sandy loam, gravelly	 CL, GM, SC-SM A-6,	A-4 A-6, A-1-b,	 0	• 	 59-97	159-97	 46-92
		sandy				_	_	_	_
	4-21		CL, GM, GC-GM A-6,	A-6, A-1-b,	0	0	154-92	54-92	41-89
		graverry rine sandy loam		*- Z-W					
	21-32	Loam, fine sandy loam,	SC-SM, SC	A-1-b	0	0	61-88	161-88	42-77
_	_	gravelly sandy loam	_	_	_	_	_	_	_
- -	32-60	Loam, fine sandy loam, gravelly sandy loam	SC-SM, SC	A-6, A-1-b 	 o	o 	61–88 	61–88 	42-77
	_								
Wurtsboro,									
extremely stony	0-2	Slightly decomposed	I P.I	A-8	0	o 	100	100	100
	2-3	France material Fine sandy loam	 ML, SM, SC-SM	SC-SM A-2-4, A-4	0	0	187-100	87-100 74-100	 59–93
	3-4	Fine sandy loam, loam	CL, SM, SC-SM A-6,	A-6, A-2-4,	0 -	0	187-100	87-100 73-100	
	-		2			_	7	7	- 67
	4, 1	Loam, time sandy toam	Сь, эм, эс-эм А-6, 	A-0, A-2-4, A-4		> 	00T-6/1	C6-/C 00T-C/ 00T-C/	06-70-
	6-18	Sandy loam, loam, fine	SC-SM, GM, CL	CL A-6, A-1-b,	0	0	150-100	50-100 50-100	33-87
_	_	sandy loam		A-2-4	_	_	_		_
	18-24		-GM,	A-6, A-1-a,	- 0 -	0	119-100	19-100 19-100	112-87
		loam, fine sandy loam	SC-SM		_	_	_		_
	24-33	_	GC, GP-GM,	A-6, A-1-a,	- · 0	o 	124-75	124-75	116-65
- •		loam, fine sandy loam		A-2-4					
	33-60	Gravelly sandy loam, loam. fine sandv loam	ISC-SM, SC,	A-6, A-1-a, A-2-4	 o	o 	133-87	33-87	22-75
		-		-	_				

Table 14. -- Engineering Properties -- Continued

	1		Classi	Classification	Fragn	Fragments	ă I		ge pas
Map unit symbol and soil name	Depth	USDA texture			>10	3-10		steve	number
			Unified 	AASHTO	ni 	ni -	4.	10	40
0000	In				Pct	Pct			
Swartswood,									
extremely stony	0-1	Slightly decomposed	PT 	A-8	0	0	100	100	100
_	1-2	Loam	MI, GC-GM, CL	CL A-6, A-2-4,	0	0	157-97	157-97	47-87
	2 - 2		Mo	A-4			 50_07	1 50-07	1
_		roam', rriie	, Eg		 	· 	,	, o	70 - 0#
	3-4	Sandy loam, gravelly	CI, GM, SC-SM	SM A-6, A-1-b,	0	0	159-97	159-97	146-92
-	4-21	Sandy	こと	CT. A = A = 1 = b	_	_	154-92	154-92	141-89
	† •	elly fi	5	4 4	·	·	, 	, ,)
_	21-32	Loam, fine sandy loam,	SC-SM, SC	A-1-b	0	0	161-88	61-88	42-77
	0	elly sandy l			_ (-	_ ;	- 5	1
	32-60	Loam, iine sandy loam, gravelly sandy loam 	SC SM , SC	A-1-D	 -	> 	88-191	88-19-	142-//
298075	•	;					:	:	
Colonie	0-2	fine	SM	A-4	0	0	195-100		88-10
_	2-11	fine sand			_ _	0	95-100	8	188-10
	11-24	Loamy fine sand, fine sand	SP-SM, SM	A-2-4, A-3	 o	0	96-100 	91-100 	71-10
_	24-40	Loamy fine sand, fine	SP-SM, SM	A-2-4, A-3	0	0	196-1001	191-100 71	171-10
_		y loam	_		_		_	_	_
	40-62	Loamy fine sand, fine sandy loam, fine sand	SP-SM, SM	A-2-4, A-3	0	0	196-100	191-100 71	71-10
298188									
extremely stony	0-2	 Slightly decomposed	LA I	A-8	0	0	100	100	100
		1 🖺	_			_	_	_	
_	2-3	fine sandy	ME	4	5-23	13-23	159-100		148-10
	3-7	Cobbly fine sandy loam 	CL, SM, CL-ML A-6, 	A-6, A-2-4, A-4	3-23	3-23	77-96 	77-96 	63–96
_	7-8	Cobbly fine sandy loam	GM, ML	A-1-b, A-4	3-23	3-30	96-99	96-99	146-96
_	8-16		CL, GM, CL-ML A-6,	Ā	3-23	3-30	96-95	96-95	143-96
_		ı, stony loam			_		_	_	_
_	16-24	Fine sandy loam, silt	CI, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	96-95	96-95	143-96
		, stony loam	į					_ ;	_ :
	24-29	Loam, sandy loam, stony fine sandv loam, silt	CL, SM, SC-SM A-6, 	A-6, A-2-4, A-4	/T-Z	77-7	86-99	86-00-	51 - 98
_						_			
	29-60	Silt loam, loam, sandy loam, very cobbly fine sandy loam	CL, SM, GC-GM A-6, A-2 	A-6, A-4, A-2-4	2-17	2-22	66-98 -	66-98 -	51–98
-							_	_	

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Frag	Fragments	- A	Percentage pas	ge pas
Map unit symbol and soil name	Depth 	USDA texture 			>10	1 3-10	-,-	sieve number	number
			Unified	AASHTO	ni ni	ri ui	4	10	1 40
298189	In				Pct	Pct	<u> </u>		
Lackawanna,	0-0	 	E-0	α - 4	. .	c 	100	100	100
		plant material		·	, - –	, - –) - –	} - —	2 -
_	1 2-3	Cobbly fine sandy loam	Ä		5-23	113-23	159-100	159-100	148-10
	3-7	Cobbly fine sandy loam	CL, SM, CL-ML A-6,	A-6, A-2-4,	3-23	3-23	96-221	96-441	96-891
							_ :	_ :	
	7-8	y fine sandy	¥ i		3-23	3-30	156-96	156-96	146-96
	9T-8	Fine sandy loam, silt loam, stony loam	Съ, GM, Съ-Мъ А-6, 	A-6, A-2-4, A-4	3-23	1 3-30 1	96-96	96-96	43-96
_	16-24	Fine sandy loam, silt	CL, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	156-96	156-96	143-96
-	_	loam, stony loam	_	A-4	_	_	_	_	_
_	24-29	sandy loam,	CL, SM, SC-SM A-6,	A-6, A-2-4,	2-17	2-22	86-991	86-991	51–98
'	_	fine sandy loam, silt		A-4	_	_	_	_	_
		1	Š		7		_	- 00	
- •	09-67	odill, lodill, se	(9-4-MP-05 (MC (TO)	A-0, A-4,	/T_7	77 -	061001	061001	06 - TC
		loam, very cobbly line sandy loam		A-Z-4					
_				_		_			_
298221									
SWAL LSWOOD,			_ E	·					
extremely stony 	T - 0	Siigntiy decomposed plant material	 	- -	> 	- 	00T	001	007 -
	1-2	Loam	ML, GC-GM, CL	CL A-6, A-2-4,	0	o 	157-97	157-97	47-87
	2-3		ICT. SC-SM. GM	GMIA-6 A-1-b	c	c	159-97	159-97	146-92
))			, - –	· - –		<u>.</u>	: - -
	3-4	Sandy loam, gravelly	ICL, GM, SC-SM A-6,	A-6, A-1-b,	0	0	159-97	159-97	146-92
	_	fine sandy loam	_	A-4	_	_	_	_	_
_	4-21	Loam, sandy loam,	ICL, GM, GC-GM A-6,	A-6, A-1-b,	o _	o _	154-92	54-92	41-89
		gravelly fine sandy loam		A-2-4					
	1 21-32	a)	SC-SM, SC	A-6, A-1-b	0	0	161-88	61-88	142-77
	_	lly s			_	_	_	_	_
	32-60	Loam, fine sandy loam, gravelly sandy loam	SC-SM, SC	A-6, A-1-b 	o 	o 	61–88 	61–88 	42-77
_		1							_

Table 14. -- Engineering Properties -- Continued

- tivii veM	4		Classification	cation	Fragm	Fragments	<u>а</u>	Percentage pas	rcentage pas
and soil name	nepur	Son reacute			>10	3-10		ש א א ה	Technical
			Unified	AASHTO	ri ui	цi	4	10	1 40
	In				Pct	Pct	<u> </u>	<u> </u>	
Swartswood,									
extremely stony	0-1	Slightly decomposed	PT A	A-8	0	0	100	100	1 100
	1-2	Loam	ML, GC-GM, CL A-6,	A-6, A-2-4,	0	0	157-97	157-97	47-87
	2-3	 Sandy loam, fine sandy	A-4 CL, SC-SM, GM A-6,	A-4 A-6, A-1-b,	0	0	159-97	159-97	46-92
- •	,		- :						
	3-4	Sandy loam, gravelly fine sandy loam	CL, GM, SC-SM A-6, 	A-6, A-1-b, A-4	 	o 	59-97 	59-97 	46-92
	4-21	sand	ICL, GM, GC-GM A-6,	A-6, A-1-b,	0	0	154-92	154-92	41-89
	_	gravelly fine sandy	_	A-2-4	_	_	_	_	_
'	- 1	i	_ :			· 	_ :	_ :	_ ;
_	21-32	sandy	SC-SM, SC P	A-6, A-1-b	 o	o 	61-88 	61-88 	42-77
	32-60	gravelly sandy loam	ר בי שטריטש	A-1-4			161-88	161-88	142-77
] 	s 111y s)				} 	} 	: !
298223									
Swartswood,						_			
extremely stony	0-1	Slightly decomposed	PT P	A-8	0	0	100	100	100
_	_	plant material			_	_	_	_	_
_	1-2	Loam 	ML, GC-GM, CL A-6, 	A-6, A-2-4, A-4	 o	o 	157-97	157-97	47-87
_	2-3	 Sandy loam, fine sandy	CL, SC-SM, GM A-6,	λ-6, A-1-b,	0	0	159-97	159-97	46-92
	_	loam	_	A-4	_	_	_	_	_
	3-4	loam,	CL, GM, SC-SM A-6,	A-6, A-1-b,	- 0 -	0	159-97	159-97	46-92
_	_	sandy	_		_	_	_	_	_
	4-21	Loam, sandy loam,	CL, GM, GC-GM A-6,	A-6, A-1-b,	- 0	0	54-92	54-92	41-89
		gravelly fine sandy		A-2-4					
	21-32	Loam, fine sandy loam,	ISC-SM. SC	A-6. A-1-b	0	0	161-88	161-88	142-77
		elly s	_		_		_	_	_
	32-60	Loam, fine sandy loam,	SC-SM, SC P	A-6, A-1-b	0	0	161-88	161-88	42-77
	_	gravelly sandy loam							
_	_		_		_	_	_	_	

Table 14. -- Engineering Properties -- Continued

- today	1		Classif	Classification	Fragments	nents	Pe	Percentage pas	re pas
and soil name	T C C				>10	3-10		D > D + C	
			Unified	AASHTO	in	in	4	10	40
298255	In				Pct	Pct			
Delaware,				-	_			-	
rarely flooded-	0-1	Slightly decomposed plant material	LAI I	A-8	0	0	100	100	100
_	1-4	Fine sandy loam	CL-ML, SM	A-2-4, A-4	0	0	95-100	90-100	80-10
_	4-11	sandy	SM	ď	0	0	195-1001	95-100 91-100 79-10	79-10
_	11-20	Fine sandy loam	SM, SC-SM, CL	CL A-2-4, A-4	0	0	195-100	95-100 91-100 81-10	81-10
_	20-33	Fine sandy loam	SM, ML	ML A-4	0	0	196-100	96-100 91-100 81-10	81-10
	33-41	sandy loam	SM	_	0	0	195-100	95-100 90-100 79-10	79-10
-	41-56	Loamy sand, loam, fine	CI-MI, SM, CL	CL A-2-4, A-4	0	0	95-100	90-100	77-10
		>-	- 5	_ :		c		- 00	7
	000		CE, CE-ME		>	•	0	1001-16) T 6 /
				_					
298256 Delaware,									
rarely flooded-	0-1	Slightly decomposed	LA.	A-8	0	0	1000	100	100
- •	,	nt mate				c			7
- •	1-4	sandy	E S	A-Z-4, A-4	 - c	o c	195-1001	95-100 90-100 80-10	80-I0
-	4-11 11-11	Fine sandy toam	5	A-4, A-2-4 A-7, A-2-4		>	193-1001	95-100 91-100 /9-10	18-10 10-10
-	20133	salidy) F	_		o c	1001-261	93-100 91-100 81-10	01110
	20103	sailay	Ser'	5		o c	1961	001100	70110
	11 11 1	sanay 1	E S	_		o c	1001-100	93-100 90-100 73-10	77110
	0 1 1	sand, roam,	OM,	_	>	>			01-//
_	26-60	Loamy sand, fine sandy	SM, CL, CL-ML A-4	A-4	0	0	195-1001	-100 91-100 79-10	79-10
		loam							
298257									
Wallpack	0-3	Silt loam	lgc, cr	A-4, A-6,	0	0	35-100	35-100 31	31-96
	8-8	 Gravellv silt loam	lec. cr	A-2-4 A-4, A-6,	0	0	135-1001	35-1001	31-95
_				A-2-4			_	_	
	9-16	Fine sandy loam, sandy	CL, GM	A-1-b, A-6	0	0	39-100 	-100 39-100 30-10 	30-10
_		loam						_	
	16-25	ndy loam,	SM, CL	A-1-b, A-6	0	0	171-1001	41-100	32-10
		loam, gravelly silt loam, loam							
	25-65	m	CI, SP, SC	A-6, A-1-a	0	0	53-100	7-100	5-10
- -		gravelly silt loam						_	
_		_	_	_	_		_	_	

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Frag	Fragments	<u></u>	Percentage pas	ge pas
Map unit symbol	Depth	USDA texture		-	-	7	_,-	sieve	sieve number
and soll name			 Unified	AASHTO	 ori	3-10 in	4	10	1 40
000000	In				Pct	Pct	<u> </u> -	<u> </u>	
Wallpack	0-3	Silt loam	lgc, cr	A-4, A-6,	0	o 	 35-100 	35-100 35-100 31-96	31–96
	9-8	 Gravelly silt loam	lec, cr	A-2-4 A-4, A-6,	o 	o 	 35-100 	35-100 35-100 31-95	 31-95
- 	9-16	Fine sandy loam, sandy loam, loam, gravelly	CL, GM 	A-z-4 A-1-b, A-6 	°	0	 39-100 	 39-100 30-10 	 30-10
	16-25		 SM, CL 	 A-1-b, A-6 	o 	o 	 71-100 	 41-100 32-10 	 32-10
_ 	25-65	loam, loam Loam, sandy loam, fine sandy loam, very gravelly silt loam	 CL, SP, SC 	 A-6, A-1-a 	o 	o 	 53-100 	7-100 	 5-10
298259 Wallpack,									
extremely stony	0-1	Slightly decomposed	LA -	A-8	o 	o 	100	100	100
	1-2	Gravelly silt loam Sandy loam, fine sandy loam, gravelly silt	ISC, OH GC-GM, CL 	A-4, A-5 A-4, A-6 	00	00	100 63-91 	61-91 63-91 	55-89 51-91
	5-18	loam, loam Fine sandy loam, sandy loam, loam, gravelly	 CL, GC-GM 	 A-6, A-4 	o 	o 	 64-92 	 64-92 	 52-92
- 	18-24	silt loam Fine sandy loam, sandy loam, silt loam,	 CL, GC-GM, GC 	 GC A-1-b, A-6 	o 	o 	145-79	45-79 	 36-79
- 	24-42	Fine sandy loam, sandy loam, gravelly silt	GC-GM, CL	A-2-4, A-6	0	o -	146-80	146-80	 36-80
	42-60	loam, loam Fine sandy loam, sandy loam, silt loam, gravelly loam	GC-GM, CL	A-1-b, A-6 	0	o 	145-79	45-79 	 36-79
-		_	_	_	_	_	_	_	

Table 14. -- Engineering Properties -- Continued

Mey tivit	4	Carrista A GOIT	Classi	Classification	Frag	Fragments	<u> </u>	Percentage pas	rcentage pas
and soil name	1 1 1 1 1	רפי בינונים		_	- >10	3-10	-,-	D > D -1 C	
_ -			Unified	AASHTO	ri ri	ni ni	4	10	1 40
298260	In				Pct	Pct	<u> </u> _		
Wallpack,		רבינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן ארדינוסן אר	Eq.	00 	- -				100
		plant material	4 _	· 	· - –	, - –		} - –	2
_	1-2	Gravelly silt loam	ISC, OH	A-4, A-5	o _	°	100	61-91	55-89
_	1 2-5	oam, fine	GC-GM, CL	A-4, A-6	0	0	63-91	63-91	51-91
_		loam, gravelly silt							
	5-18	Fine sandy loam, sandy	CL, GC-GM	A-6, A-4	°	0	64-92	64-92	52-92
		-	_						
		Loam					- !	_ :	_ :
	18-24	Fine sandy loam, sandy loam, silt loam,	CI, GC-GM, GC	GC A-1-b, A-6 	o 	o 	45-79 	45-79 	36–79
_		gravelly loam							_
	24-42	Fine sandy loam, sandy	GC-GM, CL	A-2-4, A-6	0	0	146-80	146-80	136-80
		loam, gravelly silt							
		I, LOGIII					1	1	1
- -	42-60	Fine sandy loam, sandy loam, silt loam,	GC-GM, CL 	A-1-b, A-6 	o 	o 	45-79 	45-79 	36-79
		gravelly loam							
298261									
Wallpack 	ε-0 	Silt loam 	GC, CL 	A-4, A-6, A-2-4	o 	o 	35-100 	35-100 35-100 31-96 	31–96
_ =	9-8	Gravelly silt loam 	GC, CL 	A-4, A-6, A-2-4	o 	o 	35-100 	35-100 35-100 31-95 	31–95
	9-16	Fine sandy loam, sandy	ICI, GM	A-1-b, A-6	0	0	139-100	39-100 39-100 30-10	130-10
_		loam, loam, gravelly							
	16-25	andy loam,	SM, CL	A-1-b, A-6	0	0	171-100	71-100 41-100 32-10	32-10
_		loam, gravelly silt loam, loam							
	25-65	Loam, sandy loam, fine	ICL, SP, SC	A-6, A-1-a	0	0	53-100	1 7-100	5-10
_ _		sandy loam, very gravelly silt loam							
	_	_	_	_	_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

Mon times	4	Carried ACOTT	Classi	Classification	Frag	Fragments	<u>a</u>	Percentage pas	ge pas
and soil name	l Depui	OSDA CEXCUIE				3-10		S T G C	sieve number
			Unified	AASHTO	ni ni	ri ui	4	10	1 40
298262 Wallrack	In				Pot	Pot			
extremely stony	0-1	Slightly decomposed	PT	A-8	o -	0	100	100	100
	1-2	Prame marerian Gravelly silt loam	ISC, OH	 A-4, A-5	• 	0	100	161-91	 55–89
- 	1 2-5	Sandy loam, fine sandy	O	A-4, A-6	o 	o 	163-91	163-91	51-91
		loam, gravelly silt loam, loam							
	5-18		ICL, GC-GM	A-6, A-4	°	0	64-92	64-92	52-92
- -	1 18-24	Silt loam Fine sandy loam, sandy	 CL, GC-GM, GC	 GC A-1-b, A-6	0	0	145-79	145-79	 36-79
_	_	loam, silt loam,	_	_	_	_	_	_	_
_	_				_	_	_	_	_
- •	24-42	indy loam,	GC-GM, CL	A-2-4, A-6	o 	o 	146-80	146-80	36–80
		Loam, gravelly silt							
	1 42-60		GC-GM, CL	 A-1-b, A-6	·	0	145-79	145-79	136-79
					_	_	_	_	_
_		gravelly loam							
298265									
Venango,	_	_	_	_	_	_	_	_	_
extremely stony	1 0-1	Slightly decomposed	PT	A-8	o 	o 	100	100	100
	1-6	Prancing Certain Silt loam	CI	A-6	o 	0	174-100	 74-100 74-100 69-94	 69–94
_	1 6-16	Silty clay loam, loam,	CI	A-6	0	0	170-92	170-92	61-90
	_	silt loam			_	_	_	_	_
_	16-22	t loam,	Igc, cr	A-7-6, A-6	0	0	146-93	46-93	142-93
		gravelly silty clay loam							
	22-34	loam,	IGC, CL	A-7-6, A-6	°	0	146-93	146-93	42-93
_		gravelly silty clay							
_	34-60	silt loam,	IGC, CL	A-7-6, A-6	°	0	146-93	46-93	42-93
		gravelly silty clay loam							
		_	_		_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Frag	Fragments	<u>A</u>	Percentage pas	ge pas
Map unit symbol and soil name	Depth 	USDA texture 			>10	3-10		sieve number	number
_ _			Unified	AASHTO	ni n	ni -	4	10	1 40
990806	In				Pct	Pct			
Venango,									
extremely stony 	0-1	Slightly decomposed plant material	Ta	A-8 	o 	o 	100	100	100
	1-6	Silt loam	CI	A-6	0	0	174-100	74-100 74-100 69-94	169-94
	6-16	Silty clay loam, loam,]CI	A-6	o 	0	170-92	170-92	61–90
_	16-22		IGC, CI	A-7-6, A-6	0	°	146-93	146-93	142-93
_		gravelly silty clay loam							
	22-34	Loam, silt loam,	IGC, CL	A-7-6, A-6	0	°	146-93	146-93	42-93
		gravelly silty clay loam							
	34-60	Toam silt loam	CT.	1A-7-6 A-6	c	c	146-93	146-93	142-93
_	: : - –	gravelly silty clay		· · · · · · · · · · · · · · · · · · ·	· - –	· - –	: -	: _	! _
		loam							
298409									
Swartswood,			_	_	_	_	_	_	_
extremely stony	0-1	Slightly decomposed plant material	PT 	A-8 	o 	o 	100	100	100
_	1-2	Loam	ML, GC-GM, CL	CL A-6, A-2-4,	0	0	157-97	157-97	147-87
	_				_	_	_	_	_
	2-3	Sandy loam, fine sandy loam	CL, SC-SM, GM 	GM A-6, A-1-b, A-4	o 	o 	59-97 	59-97 	46-92
	3-4	Sandy loam, gravelly	ICL, GM, SC-SM A-6,	A-6, A-1-b,	0	0	159-97	159-97	146-92
	_	fine sandy loam	_	A-4	_	_	_	_	_
_	4-21	Loam, sandy loam,	ICL, GM, GC-GM A-6,	A-6, A-1-b,	0	0	154-92	54-92	41-89
		gravelly fine sandy		A-2-4					
	21-32	Toam fine sandy loam	NO IN	A-6 A-1-h		-	161-88	161-88	142-77
	1	elly s			, - –	· - –	-	5	! _
	32-60	Loam, fine sandy loam,	SC-SM, SC	A-6, A-1-b	0	0	161-88	161-88	42-77
- -		gravelly sandy loam 							

Table 14. -- Engineering Properties -- Continued

+i-ri-	4	- KOSII	Classif	Classification	Frag	Fragments	<u>-</u>	Percentage pas	rcentage pas
and soil name	inded	בפארמדה הבארמדה			710	3-10		ע א ר מ	Technical
			Unified	AASHTO	ni n	ni n	4	10	1 40
298411	In				Pot	Pot			
Swartswood, extremely stony	0-1	 Slightly decomposed	 PT	 A-8	o 	o 	100	100	1 100
	1-2	plant material	- TMI	 			1 57-97	1 57-97	1 47-87
_	N H		, E		· - –	· - –	<u> </u>	<u>.</u> _	
	2-3	Sandy loam, fine sandy loam	CL, SC-SM, GM 	GM A-6, A-1-b, A-4	o 	o 	59-97 	59-97 	46-92
-	3-4	loam,	CL, GM, SC-SM A-6,	A-6, A-1-b,	0	0	159-97	159-97	146-92
-	_	fine sandy loam			_	_	_	_	_
	4-21	Loam, sandy loam,	CL, GM, GC-GM A-6,	A-6, A-1-b,	o _	0	154-92	154-92	41-89
		gravelly fine sandy loam		A-2-4					
_	21-32	Loam, fine sandy loam,	ISC-SM, SC	A-6, A-1-b	0	0	161-88	161-88	142-77
_		elly s	_		_	_	_	_	_
- -	32-60		SC-SM, SC	A-6, A-1-b	0	o 	161-88	161-88	42-77
	_	_			_			_	_
298413									
Swartswood,			E	0					7
Arremety scony		sirgnery decomposed plant material		0 4		- 	001	9	7 -
	1-2	Loam	ML, GC-GM, CL 	CL A-6, A-2-4, A-4	o 	o 	157-97	57-97 	47-87
_	1 2-3	Sandy loam, fine sandy	CL, SC-SM, GM	GM A-6, A-1-b,	°	0	159-97	159-97	146-92
_	_	loam	_	A-4	_	_	_	_	_
	3-4	loam,	CL, GM, SC-SM A-6,	A-6, A-1-b,	0	0	159-97	159-97	46-92
-	_				_	_	_	_	
	4-21	Loam, sandy loam,	CL, GM, GC-GM A-6,	A-6, A-1-b,	o 	o 	154-92	154-92	41-89
			- -	F 7 - U					
_	21-32		SC-SM, SC	A-6, A-1-b	o _	0	61-88	61-88	142-77
-	_	lly s	_		_	_	_	_	_
	32-60	Loam, fine sandy loam, gravelly sandy loam	SC-SM, SC	A-6, A-1-b 	o 	o 	61 – 88 	61-88 	42-77
-		1					_		

Table 14. -- Engineering Properties -- Continued

- Lodmin + in: weW	4+	Cantact (CD)	Classi	Classification	Fragments	ents	Pe	Percentage pas	re pas
and soil name	i de la companya de l				>10	3-10		ייי ארער ארער	
			Unified	AASHTO	i n	in	4	10	40
318498	In				Pct	Pct			
Hazen, very stony	0-1	 Slightly decomposed	_ 	- B-8	0	0	1000	100	100
	1-10	plant material Loam	 ML, SC-SM, CL	 CL A-6, A-4	0	0	 86-100	 86-100	71-90
-	10-18	Sandy loam, coarse	SC-SM,		0	0	172-100 72-100 50-79	72-1001	50-79
	0	y loam	Ę	A-2-4		7			79
	18-79	Sand, Loamy sand, very stony loamy coarse	SC-SM, GP, SM 	SM A-Z-4, A-1-a, A-1-b	- T9-0	0-2T	14-92 	14-92 	0-04
-		, coars		. '	. — .	i			,
	29-41	Sand, loamy sand, very gravelly coarse sand.	SP-SC, GP, SP 	SP A-1-b, A-1-a 	T9-0	0-51	62-78	2-66	2-40
-		coarse sar		, ,	. — -	2	7		,
	4 T - 60		ואביאפו	A-I-D, A-I-a	T0-0	TC-0	6/-/5	9910	Z-40
_ 		extremely gravelly coarse sand, loamy coarse sand							
Hoosic, very									
stony	0-1	Slightly decomposed	LA!	IA-8	0	0	1000	100	100
	0	plant material Gravellv loam		P-4 9-4		c	 57-97	45-97	37-87
	1	פוס פודא דרכשוו)			•	 -		ò
_	9-21	Loam, sandy loam, very	ISC, GP, GM	A-6, A-1-a	0	0-21	138-85	7-85	4-61
	21-27	coars	SC-SM, GP,	A-2-4,	0	0-51	41-85	6-78	3-54
		nely gra	GP-GM	A-1-b, A-1-a					
		Loamy coarse sand, loamy sand							
_	27-37	Loamy sand, sand,	SC-SM, GP	A-1-b, A-1-a	0-14	0-51	137-85	6-78	2-48
		extremely gravelly							
		sand,					_		
_	37-49		SC-SM, GP, SP	SP A-1-b, A-1-a	0	0-51	41-85	6-78	2-48
		Ø	_	_	_		_	_	
-		coarse sand, loamy	_	_	_		_	_	
		se sand	č			i	- :		,
	49-60		IGP, SC-SM, SW	SW A-1-b, A-1-a	0-14	0-21	141-85	8/-9	2-48
		ely gra							
		coarse sand, roamy							
_					_		_	_	

Table 14. -- Engineering Properties -- Continued

Men tinit	l hent		Classi	Classification	Fragments	ents	Pe	Percentage pas	re pas
and soil name	T Delo	רפארמים		<u> </u>	>10	3-10		מדער ש	
			Unified	AASHTO	i 	цi	4	10	40
318533	In				Pot	Pct			
Hazen, very			_ !	:		•			0
stony	I - 0	SlightLy decomposed plant material	TA –	- - 	 -	0	001 -	001	100
	1-10	Loam	SC-SM,	CL A-6, A-4	0	0	186-1001	86-100 86-100 71-90	71-90
	10-18	Sandy loam, coarse	SC, SC-SM, SM	SM A-4, A-1-b,	0	0	172-100	72-100	50-79
		y loam	į	A-2-4		Ĭ			,
	67-87 I	Sand, Loamy Sand, Very	ISC-SM, GF, SM	SM A-Z-4,	T9-0	TC-0	114-92	14-92	0 - 0 4
		sand, coarse sand		:					
	29-41	Sand, loamy sand, very gravelly coarse sand,	SP-SC, GP, SP 	SP A-1-b, A-1-a 	0-61	0-51	137-79	5-66	2-40
	41-60	Loamy coarse sand Sand, loamy sand,	 SP-SC, GP	 A-1-b, A-1-a	0-61	0-51	137-79	5-66	2-40
		extremely gravelly coarse sand, loamy							
		sand							
Hoosic, very			_		_			_	
stony	0-1	Slightly decomposed plant material	I P.T.	A-8	 o	0	1000	100	100
	1-9	Gravelly loam	MI, GC, GC-GM	GC-GM A-6, A-4,	0	0	157-97	45-97	37-87
	_				_		_	_	
	9-21	Loam, sandy loam, very	ISC, GP, GM	A-6, A-1-a	0	0-21	138-85	7-85	4-61
		gravelly coarse sandy loam							
	1 21-27		SC-SM, GP,		0	0-51	41-85	6-78	3-54
	_	ely gra	GP-GM	A-1-b, A-1-a	_		_	_	
		Loamy coarse sand,							
	1 27-37	UΣ	SC-SM, GP	A-1-b, A-1-a	0-14	0-51	137-85	6-78	2-48
	_	mely c			_		_	_	
	_		_	_	_		_	_	
	_	coarse sand	_	_	_		_	_	
	37-49		ISC-SM, GP, SP	SP A-1-b, A-1-a	0	0-51	41-85	6-78	2-48
		ely gra							
		coarse sand, roamy							
	49-60		GP, SC-SM, SW	SWIA-1-b, A-1-a	0-14	0-51	141-85	6-78	2-48
	:				-])	:		l
	_	coarse sand, loamy	_	_	_		_	_	
	_	coarse sand	_	_	_		_	_	
	_	_	_	_	_		_	_	

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragments	nents	Pe	Percentage pas	ye pas
Map unit symbol	Depth	USDA texture				,		sieve number	number
and soll name			175: 6:00			3-10 تا تا		9	70
				Olucar		Ħ	r 	۹) †
0000	In				Pct	Pct			
Catden	0-2	 Muckv peat	Td.	8-8	0	0	100	100	100
	2-13		LAI	A-8	0	0	100	100	100
	13-20	Woody muck	PT	A-8	0	0	100	100	100
	20-32		PT	A-8	0	0	100	100	100
_ -	32-60	Muck	PT	A-8	0	0	100	100	100
319784		_`							
	0-1	Slightly decomposed	L B T	A-8	0	0	100	100	100
	1-8	plant material Silt loam	IMI. CI.	 A-4		0	185-1001	85-100	75-96
	8-14	Fine sandy loam, very		A-4	0	0	100	86-100 68-10	68-10
		sandy loam,			_		_	_	_
		ı, loam		_	_		_	_	
	14-18	sandy loam, v	SM, CL	A-4	0	0	186-100	86-100	64-10
		fine sandy loam, loam, silt loam							
	18-23	ທ	SM, CL	A-4	0	0	186-100	6-100 86-100	64-10
_		sandy loam,	_	_	_		_	_	_
					_		_	_	_
_	23-31	fine sa	SP, SP-SM	A-1-b, A-1-a	0	0	177-87	121-49	110-34
_		sand, sand, extremely							
		gravelly loamy coarse							
	31-36	fine san	SP-SM. SP	N-1-2	 c	c	178-87	121-49	8-30
) 	sand,		3	,	•		: !)
		lly co	_	_	_		_	_	_
		loamy coarse sand	_	_	_		_	_	_
	36-45	Loamy fine sand, loamy	ISP, SP-SM, SV	SW A-1-a	0	0	168-87	114-49	1 5-30
		sand, sand, very	_	_	_		_	_	
			_	_	_		_	_	_
		/ coar		_	_			_	_
	45-55		SP, SP-SM, SV	SW A-1-a	0	0	165-87	114-49	5-30
		id, extr			_ ·		_		_
					_			_	
'	;	y coarse san			_		_ :	_ :	_
'	25-60		SP, SP-SM, SV	SW A-1-a	0	0	178-88	121-49	8-30
'		ıd, very	_	_	_		_	_	_
		ly coa			_ ·		_		_
		loamy coarse sand							
_		_	_		_		_	_	_

Table 14. -- Engineering Properties -- Continued

Todamen + inc.	4		Classi	Classification	Fragi	Fragments	Ā	Percentage pas	ye pas
and soil name	nepun I	OSDA CEXCUIE			>10	3-10		steve number	ımıroer
			Unified	AASHTO	in	i n	4	01 -	40
319784	In				Pot	Pot			
Halsey, very	_							_	
stony	1-0 -	Slightly decomposed plant material	<u>Б</u> Т	A-8	0	o 	100	100	100
	1-5	France and Corner	IMI. CI.	A-4	0	0	100	192-1001	82-96
	5-11	Silt loam		A-4	0	0	100	192-1001	82-96
	11-20	Loam, very fine sandy		A-4	0	0	100	186-100	168-10
	_	loam, silt loam, fine	_	_		_	_	_	_
	_	/ loam					_	_	_
	1 20-25	Sand, loamy fine sand,	SP-SM, SM	A-1-b, A-2-4	0	0	100	154-92	132-76
		sand, loamy							
		sand, Loamy coarse sand	_ ;	,		•	- 3		
	25-35	oamy r	SM, SW	A-1-b, A-1-a	>	> 	68-99	8/-57	10-48
		very gravelly coarse sand loamy sand							
	35-49	loamy f	SP-SM, SW	A-1-b, A-1-a	0	0	160-70	125-60	10-37
		loamy coarse sand,					_	_	_
	_	very gravelly coarse	_	_			_	_	_
	_		_	_			_	_	_
	49-56		SP-SM, SW, SP	SP A-1-b, A-1-a	0	0	99-091	125-60	110-37
	_	loamy coarse sand,	_	_			_	_	_
	_	avelly	_	_			_	_	_
	_		_				_	_	_
	1 56-60	Sand, loamy fine sand,	SP-SM, GP	A-1-b, A-1-a	0	0	143-66	125-60	10 - 37
	_	loamy coarse sand,	_	_		_	_	_	_
-		coarse sand, loamy sand							
543222									
Andover,	_	_	_	_			_	_	_
extremely stony	8-0 1	Gravelly loam		A-4, A-2	5-10	5-15	170-100	165-95	06-09 I
	1				c	6	- 6		
	/T-8 -	Gravelly clay loam, gravelly loam cobbly	SC CT MT.	W-4, A-2	n -	C Z _ O _	180-95	00-00	90-80
	17-53	Gravelly clay loam,	SC-SM, SM,	A-4, A-2	0-3	0-25	180-95	165-85	60-85
	_	gravelly loam, cobbly	CL-ML, ML				_	_	_
		sandy clay loam			(- 2		
	23-65	Gravelly loam, very gravelly loam cobbly	CTMT. MT.	A-4, A-2	ກ - ດ	2-30	28-0/I	08-cc	e / - 0e
							_	_	_
			_	_		_		_	_

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Frag	Fragments	l Pe	Percentage pas	ye pas
Map unit symbol	Depth	USDA texture			5	6		sieve number	number
and soll name			Unified	AASHTO	ori ui	oric ui	4	10	40
E 4 3 2 2 2 2	In				Pct	Pct			
Buchanan,	<u> </u>		S S		00-9		0	70	7
			, g	ď	0	2		2	
	6-23	ly loam, s	O	A-6, A-4, A-2	0-3	0-20	150-100 45-90	45-90	40-90
		loam, gravelly sandy clay loam	Съ, <u>съ</u>						
	1 23-47	ly loam,		A-6, A-4, A-2	0-3	0-20	150-100 30-80	30-80	30-75
	1 47-61	channery clay loam Gravellv loam, silt	CL, GM SM, SC, ML,	 A-6, A-4, A-2	0-1	0-20	 50-100 30-80	30-80	30-75
- -	 	≥1	, GM	ì	1				!
543243									
Berks	0-10	Channery loam	IMI, SC, GC, I GM	A-4, A-2	0	5-20	150-80	45-70	40-60
_	10-26	y sil	SC, SM, GC,	A-4, A-6,	0	0-20	140-80	35-70	30-60
		loam, very channery loam, very channery silt loam	₩ 	A-1, A-2 -					
- -	26-33	Channery loam,	IGC, SM, GM	A-2, A-1	0	0-30	35-65	25-55	20-40
_ 		extremely channery loam, channery silt loam							
-	33-43	Bedrock	:	<u></u>	-				-
Weikert	8-0	 Channery silt loam	SM, ML, GM		0	0-10		35-70	25–65
_	8-15		GP-GM, GM	A-2, A-1	0-1	0-20	115-60	10-55	5-45
	15-18	loam, gravelly loam Extremely channery silt	 - GP-GM	 - -	0-1	0-30	115-60	10-55	5-45
-		loam, very channery							
		silt loam, gravelly							
-	18-20	Bedrock	;		!				-
543246									
Buchanan	L 0 - 1	Silt loam, gravelly loam	MI, SC, GM,	A-6, A-4, A-2 	0	0-10	50-100 	45-75	40-75
	7-21	ly 108		A-6, A-4, A-2	0	0-20	50-100	45-90	40-90
	21-65	loam, clay loam Cobbly clay loam, silt loam loam	SM, SC, ML,	 A-6, A-4, A-2 	0-1	0-25	 50-100 30-80 	30-80	30-75
- -									

Table 14. -- Engineering Properties -- Continued

- today	, ,		Classi	Classification	Frag	Fragments	Pe	Percentage pas	ge pas
and soil name	The Port				>10	3-10		ש א א	T ACTION 1
			Unified	AASHTO	in	ni n	4	10	40
543247	In				Pct	Pct			
Buchanan, extremely stony	0-3	 Silt loam, gravelly loam ML,	MI, SC,	 A-6, A-4, A-2	0	0-10	 50-100 45-75	45-75	 40-75
			SC-SM, CL,						
	3-21	1y loa) ညှိ	A-6, A-4, A-2	0	0-20	50-100 45-90	45-90	40-90
	21-65	Loam, clay Loam Cobbly clay loam, silt Loam, loam	SM, SC, ML, CL, GM	 A-6, A-4, A-2 	0-1	0-25	 50-100 30-80 	30-80	 30-75
543257									
Chippewa	0 - 8			A-7, A-5	0-1	0-5	80-100	80-100 75-100 65-95	165-95
- 	0 T I 0	loam, channery silty	ML, CL-ML,	*' '	H I D	01.	0 0	0 0	0 1 0 1
	16-48	clay loam Verv channerv silt	GC, SC, CL,	 A-4, A-2	0-2	110-15	08-091	55-70	 45-70
- -		, channer nery silt	-MI						
		loam			•	_ ;	_ ;		- !
	44 8 1 8 0	Very channery silt loam, channery loam, channery silty clay loam	SM, GC, ML, CL-ML, GM	A-4, A-2	N - 0	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	08	0/-66	45-70
543258									
Chippewa	8-0	Silt loam	OL, ML	IA-7, A-5	0-1	0-5	180-100	80-100 75-100 65-95	65-95
	8-16		ML, SC-SM,	A-4	0-1	5-10	165-85	60-85	45-85
_		clay loam	(L)						
	16-48		IGC, SC, CL,	A-4, A-2	0-2	110-15	08-091	55-70	145-70
		Loam, channery loam, channery silty clay loam							
	48-80	Very channery silt	SM, GC, ML,	A-4, A-2	0-2	110-15	08-091	55-70	145-70
		loam, channery loam, channery silty clay loam	CL-ML, GM						
							_		

Table 14. -- Engineering Properties -- Continued

	Den +	AUSTI -	Classi	Classification	Frag	Fragments	<u>A</u>	Percentage pas	ge pas
and soil name	, ,				>10	1 3-10			
			Unified	AASHTO	i ni	ni n	4	10	40
543259	In				Pct	Pct			
Chippewa, extremely stony	8-0	 Gravelly silt loam 	OL, SM, GM,	 A-7, A-5	5-25	5-25	 65-90	08-091	 50-70
	8-16	Channery silt loam, loam, channery silty	GM, ML, CL, GC	A-4	0-1	5-10	65-85	160-85	45-85
	16-48		GC, SC, CL, CL-ML	A-4, A-2	0 - 5	110-25	08-091	155-70	145-70
	48-80	Very channery silt loam, channery loam, channery silty clay loam	GM, ML, CL, GC	A-4, A-2	0 - 2	110-25	08-80	155-70	45-70
543271 Delaware	0-10	 Fine sandy loam, loam Fine sandy loam, very	SM, ML SM, ML	A-4 A-4	o o	0-1	 100 99-100 	100 95-100 75-95 99-100 95-100 70-90	 75-95 70-90
	40-87	fine s	SM, ML	A-4, A-2	0	0-5	95-100	95-100 95-100 80-95 	80-95
543276 Fluvaquents	9-0	 Silt loam 	 SM, SC-SM, CT-MT. MT.	 A-4, A-2	e - 0 -	0-5	 80-100 	 65-95 	 30-65
	6-62	Gravelly silty clay loam, gravelly sand, clay	SM, SC, CL,	A-4, A-2	0 - 2	8 - 0	180-100	80-100 65-95	30-65
543292 Hazleton, extremely stony	9-0	 Very channery loam	 - SM, GC-GM, GM, MT.	 A-4, A-2	5-20	115-50	 - 60-85	150-80	 50-70
	6-43	 Very channery loam, channery loam, loam	. 02	A-4, A-2, A-1 	0-2	0-20	160-95	145-90	35-70
	43-55	Extremely channery loam, very channery loam, very channery		A-4, A-2, A-1 	2-10	5-60	150-80	35-75 	25-65
	55-80	sandy loam, very channery loamy sand Bedrock							

Table 14. -- Engineering Properties -- Continued

Map unit symbol Depth and soil name		CLGGGL.	Classification	I Lag	Fragments	_ ĭ	Percentage pas	ge pas
	1 USDA texture			>10	3-10		sieve number	number
		Unified	AASHTO	ri u	ri ui	4	10	1 40
				Pct	Pct			
<pre>hazleton, extremely stony 0-6</pre>	 Very channery loam 	SM, GC-GM,	A-4, A-2	5-20	115-50	160-85	150-80	 50-70
6-43	 Very channery loam, channery loam loam	SM, SC-SM,	A-4, A-2, A-1	0-5	0-20	160-95	145-90	 35-70
43-60	Extremely channe		A-4, A-2, A-1	2-10	1 5-60	150-80	35-75	25–65
	loam, very channery loam, very channery sandy loam, very	SC, GC, GM -						
08-09	channery loamy sand Bedrock							
543299 Laidiq,								
extremely stony 0-3	Very gravelly loam	SC-SM, SM,	A-4	5-20	115-30	165-90	150-80	45-80
3-38	Gravelly loam, channery		A-6, A-4, A-2	0 - 5	5-20	170-95	150-90	140-80
38-62	Gravelly Channery channery	GC-GM, SC, CL-ML, GC	A-6, A-4, A-2 	0 - 5	5-20	150-90	140-85	30-80
543300 Laidig, extremely stony 0-3	 - Very gravelly loam	 - SC-SM, SM,	R-4	5-20	 - 15-30	 - - - - - - - - - - - 	 - 50-80	 45-80
		-ML, GC-GM	,	L		200	9	
21-138 	Gravelly loam, channery sandy clay loam, channery sandy loam	SC, SM, CL, ML	A-6, A-4, A-2 	s - 0	02-50	აგ-0/	06-06-	40-80
1 38-62	Gravelly loam, channery loam, channery sandy	GC-GM, SC, CL-ML, GC	A-6, A-4, A-2	0 - 5	5-20	50-90	140-85	130-80
543304 Laidig 0-3	 Very gravelly loam 	 SC-SM, SM, CT-MT. GC-GM	 A-4	5-20	115-30	65-90	150-80	 45-80
3-38	Gravelly loam, c sandy clay loam	g G	A-6, A-4, A-2	0-5	5-20	170-95	150-90	140-80
38-62 38-62 	channery sandy loam Gravelly loam, very channery loam, channery sandy loam	GC-GM, SC, CL-ML, GC	A-6, A-4, A-2	0 - 5	5-20	50-90 150-90	140-85	 30-80

Table 14. -- Engineering Properties -- Continued

	:		Classi	Classification	Fragn	Fragments	A P	Percentage pas	ge pas
Map unit symbol and soil name	l Depth	USDA texture 			>10	3-10		sieve number	number
			Unified	AASHTO	ri n	ni n	4	10	40
543327	In				Pct	Pct			
Swartswood	0-11	loam	ML,		0	0-50	06-091	50-75	30-60
	11-34	Gravelly fine sandy loam, flaggy sandy loam, channery loam	SM, ML, GM -	A-4, A-2, A-1 		0-25	06-09-	50-90	- 30 - 85
- -	34-47	cavelly loam,	MI, SM, GM, GW-GM	A-4, A-2, A-1 	0	5-25	50-85 	135-80	20-75
		sandy loam, channery loam 							
543328	,		!	•				: -	
Swartswood	0-11	Gravelly loam Gravelly fine sandw	SM, ML, GM	A-4, A-2, A-1 A-4 A-2 A-1	 	0-20	06-091	50-75	130-60
	1	Laggy	Ì	, 4) 	<u> </u>	2)
_	34-47		MI, SM, GM,	A-4, A-2, A-1	0	5-25	150-85	35-80	120-75
		sandy loam, flaggy sandy loam, channery loam	GW-GM -						
543330									
extremely stony		 Gravelly loam	SM, ML, GM	A-2,	2-15	5-20	06-091	150-85	 30-80
	11-34	Channery loam, flaggy sandy loam, gravelly fine sandy loam	SM, ML, GM 	A-4, A-2, A-1 	0	0-25	06-091	150-90	30-85
- -	34-47	ravelly loam,	ML, SM, GM, GW-GM	A-4, A-2, A-1	0	5-25	150-80	35-80	120-70
		sandy loam, channery loam 							
Wurtsboro, extremely stony	0-10	 Gravellv loam	 SM, ML, GM	 A-4, A-2	0-10	115-25	170-100	65-90	 55–90
1	Н .		₩ B	A-4, A-2	0	0-15	170-95		45-85
- 		sandy loam sandy loam sandy loam							
	20-64	Fine sandy loam, very gravelly fine sandy	SM, GM	A-4, A-2, A-1 	0	0-20	50-95 	135-90	130-80
		loam, very gravelly loam 							

Table 14. -- Engineering Properties -- Continued

Men tinit cerminal	4 4 4		Classi	Classification	Fragi	Fragments	Ă	Percentage pas	ge pas
and soil name	i de la				>10	3-10		ט ט א	
			Unified 	AASHTO	ni ni	ni n	4	10	1 40
543331	In				Pct	Pct			
					_	_	_	_	_
extremely stony 	0-11 11-34	Gravelly loam Channery loam, flaggy sandy loam, gravelly	SM, ML, GM SM, ML, GM 	A-4, A-2, A-1 A-4, A-2, A-1	2-15	5-20 0-25	06-091	50-85 50-90 	30-80 30-85
	!	sandy 1		•			!	!	:
	34-47	Very gravelly fine sandy loam, flaggy sandy loam, channery loam	Ml., SM., GM., GW-GM -	A-4, A-2, A-1 	o 	5-25	08-09-	32-80 	20-70 - - -
Wurtsboro,									
extremely stony	0-10	Gravelly loam, fine Gravelly loam, fine sandy loam, channery silt loam, gravelly fine sandy loam	SM, MI, GM	A-4, A-2 A-4, A-2	0-10	115-25	70-100 70-95 	65-90 55-90 	55-90 45-85
	20-64	sandy l	SM, GM	A-4, A-2, A-1	0	0-20	50-95	35-90	130-80
543359									
Volusia	8-0	Gravelly silt loam	GC, SC, CL,	A-4	0	0-2	170-85	165-80	155-80
	8-15	Channery silt loam, channery loam, silt loam	GC-GM, SC, CL, CL-ML	B-4	0	5-10	165-90	160-85	50-85
	15-70	Channery silt loam, channery loam, silty clay loam	SC, SC-SM, CL, CL-ML	B-4	0	110-25	175-90	170-85	60-85
	70-80	Very channery loam, channery loam, silt loam	GC, SC, CL, CL-ML	A-4, A-2, A-1	0	110-25	140-90	35-85	30-85
543360 Volusia,									
extremely stony	0-8	Gravelly silt loam	Isc, GC, CL	A-4	5-25	5-25	165-85	08-091	150-80
	8-15	silt 7 loam	0 \	A-4	0-1	5-10	65-90 	160-85	50-85
	15-70	Channery silt loam, channery loam, silty	SC, SC-SM, CL, CL-ML	A-4	0-1	110-25	175-90	170-85	60-85
	70-80	Very channery loam, channery loam, silt loam	GC, SC, CL,	A-4, A-2, A-1	0-1	10-25	140-90	35-85	30-85
		-	_	_	_	_	_	_	

Table 14. -- Engineering Properties -- Continued

				Classi	Classification	Frace	Fracments	1	Percentage pas	מפנת סד
Map unit symbol	Depth	USDA texture				5		i - –.	sieve	number
and soil name				7	C F F	>10	3-10		,	
			5 	Unitied	AASHTO	r r		 4	0 	
2002	In					Pct	Pct			
Wurtsboro	0-10	silt 1		Σ	A-4, A-2	0	0-10	170-95	165-75	55-70
	10-20	Gravelly loam, fine sandy loam, gravelly sandy loam, channery	SM, GM	Σ	A-4, A-2 	0	0-15	70-95 	55-90 -	45-85
	20-64	silt loam Fine sandy loam, very gravelly sandy loam, very channery loam	SM, GM	×	A-4, A-2, A-1	0-1	0-20	 50-95 	135-90	30-80
543375										
Wurtsboro	0-10	silt]		Z :	A-4, A-2	0 0	0-10	170-95	165-75	155-70
	07-07	Gravelly loam, line sandy loam, gravelly sandy loam, channery silt loam		Σ!		>		0 0 0	0	
	20-64	Fine sandy loam, very gravelly sandy loam, very channery loam	SM, GM	Z	A-4, A-2, A-1	0-1	0-20	150-95	135-90	30-80
612280										
Scio	9-0	Silt loam		LI.		0	0	100	100	96-68 I
	6-13 13-23	Silt loam Very fine sandy loam, silt loam	MI, CI.	.	A-7-5, A-4 A-6, A-4 	00	o o	100 100 	100	89-96 82-10
	23-28	Very fine sandy loam,	MI, CL	ы	A-6, A-4	0	0	100	100	82-10
	28-50	Very fine sandy loam,	MI, CL	ы	A-6, A-4	0	0	100	100	82-10
	50-59		MI, CL	ы	A-6, A-4	0	0	100	100	82-10
	59-72		MIL, CI	ы	A-6, A-4	0	0	100	100	82-10
612666										
Colonie	0-2	fine	SM		A-4	0 (0	195-100	95-100 90-100 88-10	188-10
	2-11 11-24	Loamy iine sand Loamy fine sand, fine	SM, S	SP-SM	A-4 A-2-4, A-3	0 0	o o	95-100 96-100	95-100 90-100 88-10 96-100 91-100 71-10	88-10 71-10
_							_	_	_	_
	24-40	Fine sand, f	SM, S	SP-SM	A-2-4, A-3	0	o 	196-100191	191-100 71	71-10
	40-62	sandy loam, line sand Loamy fine sand, fine sandy loam, fine sand	SM, S	SP-SM	A-2-4, A-3	0	0	 96-100 91 	191-100 71	71-10
_			_		_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

today + inc. www	4	4 4001	Classi	Classification	Fragments	lents	Pe	Percentage pas	re pas
and soil name	ndad I				>10	3-10		ש ש א ש	Technology
_ _			Unified 	AASHTO	in -	in	4	10	40
612668	In				Pot	Pct			
Hoosic, very	0	 	<u> </u>	ω 	- -	c	100	00	100
-	· - —				,	•		- -)
	1-9	Gravelly loam	MI, GC, GC-GM A-6,	A-6, A-4,	0	0	157-97	45-97	37-87
	9-21	ly loam,	SC, GP, GM	A-2-4 A-6, A-1-a	0	0-21	38-85	7-85	4-61
_		gravelly coarse sandy loam							
	21-27		SC-SM, GP,	,	0	0-51	41-85	6-78	3-54
		extremely gravelly loamy coarse sand, loamy sand	MD-GD	A-1-b, A-1-a 					
	27-37	and,	SC-SM, GP	A-1-b, A-1-a	0-14	0-51	37-85	6-78	2-48
		se san			_		_		
_ _	37-49 	Loamy sand, sand, extremely gravelly	SC-SM, GP, SP 	SP A-1-b, A-1-a 	 o	0-51	41-85 	82-9	2-48
_ 									
		se sand	0					7	
	49-60	Loamy sand, extremely gravelly	GF, SC-SM, SW 	SW A-1-D, A-1-a 	0 1 4	TC-0	- 4T-83 	0 - 0	Z - 4 0
	_	san						_	
		coarse sand							
Hazen, very						,			,
stony	0-1	Slightly decomposed	LbI.	A-8	 o	0	100	100	100
	1	plant material	TMI OF TWI			c	186-1001	001-98	71 - 90
	10-18	Sandy loam, coarse	SC-SM,		. 0	0	172-100	72-100 72-100 50-79	50-79
_	· _	, loam			_			_	
_	18-29	Sand, loamy sand, very	SC-SM, GP, SM	SM A-2-4,	0-61	0-51	114-92	14-92	6-64
_		stony loamy coarse		A-1-a, A-1-b 					
	29-41	Sand, loamy sand, very	SP-SC, GP, SP	SP A-1-b, A-1-a	0-61	0-51	137-79	2-66	2-40
-		gravelly coarse sand, loamy coarse sand							
_ -	41-60 	Sand, loamy sand, extremely gravelly	SP-SC, GP 	A-1-b, A-1-a 	0-61	0-51	37-79 	5-66	2-40
_ -		coarse sand, loamy							
	_	-	-		•				

Table 14. -- Engineering Properties -- Continued

			ממר הממר	Classification	- Frag	Fracmounts	1	Dercentage nas	28.0
Map unit symbol	Depth	USDA texture					í - –	sieve number	Jumber Jumber
and soil name	,	_			>10	3-10			
			Unified	AASHTO	ni -	i ui	4.	10	40
	In				Pct	Pct			
Lordstown, very									
rocky	0-1	Slightly decomposed	TG _	A-8	o 	0	100	100	100
	1-2	Loam	CL, SC-SM, ML A-7-5,	A-7-5, A-4	0	0	100	82-100 68-90	1 68-90
_	2-3		_	SC-SM A-4, A-6	0	0	100	100	180-93
	3-5	Silt loam, loam 	GC-GM, CL	A-2-4, A-4, A-6	o 	o 	147-100	47-100 47-100	38–93
	5-17	Silt loam, gravelly loam CL,	CI, GW, GC	A-6, A-1-a,	o 	0	4-100	4-100	3-93
	17-22	Silt loam, gravelly loam CL,	CL, GW, GC	A-1-a, A-6,	o - - .	0	4-100	4-100	3-93
_					_	_	_	_	
	22-36	Silt loam, loam, very gravelly fine sandy loam	GW, CL, GC-GM A-6, A-1	A-6, A-2-4, A-1-a 	o 	o 	4-100	4-100	3-98
-	36-80	Bedrock	;	;					-
wallpack, very					_	_			
rocky	0-1	Slightly decomposed	LA.	A-8	0	0	100	100	100
_		plant material			_	_	_	_ ;	_
_	1-2	t 108			0	o _	100	61 -91	55-89
_	2-2	loam, fine	GC-GM, CL	A-4, A-6	0	0	163-91	63-91	51-91
		Loam, gravelly silt							
	5-18	π	ICI, GC-GM	 A-6, A-4	o 	0	164-92	64-92	52-92
_		ı, grav				_	_		
_		silt loam	_	_	_	_	_	_	_
_	18-24	Fine sandy loam, sandy	ICI, GC-GM, GC	GC A-1-b, A-6	0	0	145-79	45-79	136-79
		loam, silt loam, gravelly loam							
_	24-42	Ĕ,	GC-GM, CL	A-2-4, A-6	0	0	146-80	146-80	136-80
		loam, gravelly silt loam, loam							
_	42-60	Fine sandy loam, sandy	GC-GM, CL	A-1-b, A-6	· –	0	145-79	45-79	36-79
		-							
_		## E				_	_	_	

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragi	Fragments	Δ.	Percentage pas	Je pas
Map unit symbol and soil name	Depth	USDA texture 			>10	3-10		sieve number	umber
			Unified	AASHTO	ri ui	. i	4	10	40
612732	In				Pot	Pot			
Atherton, very poorly drained-	0-2	Slightly decomposed	Td.	A-8	0	0	100	100	100
- -	2-4	Moderately decomposed	_PT	A-8	0	0	100	100	100
	4-8	plant material Mucky silt loam	но	 A-7-5	。 	 0	100	 75-100 70-96	70-96
	8-10	Loam, silt loam, fine sandy loam, silty clay	MH, SM, CL	A-7-5, A-6, A-4	o 	 0	100	76-100 61-10 	61-10
_	10-18	Loam, silt loam, fine	SM, CL	A-7-6, A-6,	。 -	0	100	178-100 62-10	62-10
		sandy loam, silty clay loam, very fine sandy		A-4					
	10-20		- No	3-k 3-L-k				170-100162-10	62-10
- -	F 10 -	Loam, Silt Loam, Line sandy loam, silty clay	- SM, CL	A-4	- 	 -	90	OOT-0/	07-70
	_	loam, very fine sandy	_						
	29-32	Loam Toam silt loam fine	ZM.	 		 -	100	 78-100 <i>6</i> 2-10	62-10
	25-62	LOGIII, SIIC LOGIII, LIIIE			> 	 >	2		07 - 70
- - -		sandy loam, silty clay loam, very fine sandy		A-4					
								7	,
	32-4T	Loam, Silt loam, fine sandv loam siltv clav	ISM, CL	A-/-6, A-6, b-4	> 	 -	001	00T-8/	0T-Z9
- -		y roam,		r 4					
	:	;		_ :				_ :	,
	41-45	fine sandy	CI, SM, SC-SM		o 	- · •	100	175-100 56-10	56-10
		very fine sandy loam, silt loam, silty clay		A-2-4, A-4 					
_	_	loam	_	_	_	_		_	
_	45-50	andy loam,	SM, CL	A-7-6, A-6,	0	- 0 -	100	175-100 56-10	56-10
	_	fine s		A-4				_ :	
		silt loam, silty clay							
	- 6	Ç	č					7	7
-	09-06		ICL, SM, SC-SM		o 	 -	001	0T-96 00T-6/	0T-9C
		loam, rine sandy loam, silt loam, silty clay		A-2-4, A-4 -					
-	02-09	Losm fino sanda losm	רבי מא מביבאת ביבי מאמיים	9-L-& MS-DS			7	175-100156-10	56-10
- 		fine loam,	, FIG	A-2-4, A-4 A-2-4, A-4 	- 	- 	9		0 1 0 0
	_	loam	_						
-		_	_	_	_	_		_	

Table 14. -- Engineering Properties -- Continued

	1		Classi	Classification	Fragments	nents	Per l	Percentage pas	ge pas
and soil name	nebrn	USDA texture			>10	3-10		sieve number	number
			Unified	AASHTO	ri u	in	4	10	1 40
612732	In				Pct	Pot			
poorly drained-	9-0	 Loam	OH, MI	 A-6, A-7-5	0	0	100	173-100	 68–98
_	6-12	silty clay]	SC-SM, CL		0	0	100	175-100 61-10	161-10
		fine sandy loam, silt loam, very fine sandy		A-4					
					_ ,	•	_ ;	_ :	_ ;
	12-30	andy	SC-SM, CL	IA-6, A-7-6, I	- -	0	100	75-100 61-10	61-10
		very fine sandy loam, silt loam, silty clay		A-4					
_		loam	_	_	_		_	_	_
_	30-40	Fine sandy loam, loam,	SC-SM, CL		0	0	100	77-100 62-10	62-10
_		sandy clay loam, silt	_	A-2-4, A-6	_		_	_	_
		silt			_		_	_	
_		fine sandy		_	_		_	_	_
_	40-60	_	SC-SM, CL		0	0	100	77-100 62-10	62-10
		sandy clay loam, silt		A-2-4, A-6					
		ine sandy l					_	_	
_		_	_	_	_		_	_	_
612738		_	_	_	_		_	_	_
Fluvaquents,			_		_		_	_	_
occasionally		-		· ·		L	- 100	14 100 01 10	7
	7 1 1 2	Site iodin		ML A-7-0, A-4		0 0	195-100	93-100 /4-100 8/-10 95-100 76-100 68-10	68-10
-	12-12	Silty class Com condu				0 0	190-100	90-100157-100137-92	37-92
	1	silt loam,		A-7-6, A-6	- -	i i	2 -	2	
_		clay loam	_	_	_		_	_	_
_	18-24	clay loam, s	SM, CL		0	0-11	190-100	90-100 57-100	137-92
		loam, silty clay loam,		A-7-6, A-6					
	24-60	Silty clay loam, sandy	SM, CL, SC-SM	SC-SM A-7-6, A-4,	0-1	0-10	190-100	90-100 59-100 43-10	43-10
		clay loam, silt loam,		A-1-b					
		sandy loam		_ :	_				
_		_	_	_	_		_	_	_

Table 14. -- Engineering Properties -- Continued

	:		Classif	Classification	Fragn	Fragments	Pe	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture 			>10	3-10		sieve number	number
			Unified	AASHTO	i u	in	4	10	40
612753	In				Pct	Pct			
ack, ian									
mantle, very	0	 Slightly decomposed		α α		c	100	7	100
-	· ·	plant material			,	•) - -))
_	1-2		SM	A-2-4, A-4	0	0	174-100	_	65-10
	2-8	sandy loam	SM		0	0	175-100	_	65-10
	8-14	Silt loam, loam, fine	SM, CL, SC-SM	SC-SM A-2-4, A-4	0	0	96-57	175-96	63–96
	14_21		Š			c	90-05	90-05	142-06
	T7_#T	Sile roam, time samey loam, loam	וכדי פובי משרים -	4	>	>	96-06-	06-06-	96 - 74 -
	21-26	silt loam, gravelly	CI-MI, GM, SM	SMIA-1-b, A-4	0	0	150-96	150-96	142-96
_	: :		Ì		,	,	<u> </u>		! _
_	26-31	•	CL-ML,	A-4, A-1-a,	0	0-33	123-90	123-90	119-90
		gravelly fine sandy	GP-GM, GM	A-1-b					
-	31_36	LOGIII, LOGIII		- 4-1-4 V-4		0-10	123-00	03-00	1 0 - 00
-	001	SIIC IOdm, VELY grandl	CE-CM CM	A-1-9 A-1-0, A-1-0, A-1-9	>	1	061071	061071	1 13 - 30 1
_		Joam, loam		d -1-4					
	36-60	Silt loam, gravelly	SM, GP-GM,	A-1-a, A-4,	0	0	133-90	133-90	127-90
		fine sandy loam, loam	CL-ML	A-2-4					
612756									
Wallback.				-			_		_
aeolian							_		_
mantle, very		_	_	_			_	_	_
stony	0-1	Slightly decomposed	PT	A-8	0	0	100	100	100
	,	t mate			_ (•	_ :		
	T C		CL-ML, SM	A-Z-4, A-4	 - c	> 0	174-100	/4-100 65-10 75-100 65-10	165-10
	8-14	File Saildy Loam Fine	מ מ ה	#-Z-A /#-A SM A-2-4 A-4		0 0	175-96		901-09-
	; 	ly loam)	:	,	•	2 _	2 _	8 –
_	14-21	Silt loam, fine sandy	CL-ML, GM, SM	SM A-1-b, A-4	0	0	96-05	96-05	142-96
_				_			_	_	_
	21-26	loam, gravell	CL-ML, GM, SM	SM A-1-b, A-4	0	0	96-091	96-0 9 1	42-96
		sandy	_ :		_ (0		_ 0	_ :
•	26-31			A-4, A-1-a,	- ·	0-33	06-821	06-821	1 19-90
		gravelly fine sandy loam, loam	GP-GM, GM 	A-1-b					
_	31-36	Silt loam, very	CI-MI,	A-4, A-1-b,	0	0-33	123-90	123-90	119-90
		gravelly fine sandy	GP-GM, GM	A-1-a			_	_	_
•	,				_ ((- 5
	36-60	Silt Loam, gravelly fine sandv loam, loam	SM, GP-GM, CL-ML	A-1-a, A-4, A-2-4	 -	5	133-90 	08-881 	27 – 90
		/	!				_		
-				•					

Table 14. -- Engineering Properties -- Continued

Man tint reM	Tool th		Classif	Classification	Fragr	Fragments	ă L	Percentage pas	ye pas
and soil name	1 1 1				>10	3-10	_		
			Unified	AASHTO	ni	ni n	4	10	40
612757	In				Pct	Pct			
Wallpack,									
mantle, very									
stony	0-1	Slightly decomposed	PT	A-8	- 0	0	100	100	100
_		t mate			_	_	_	_	
_	1-2	Fine sandy			- -	0	174-100	74-100 74-100 65-10	65-10
_	2-8	_	SM, S		- 0	0	175-100	0	65-10
_	8-14	<u>~</u>	SM, CL, SC-SM	SC-SM A-2-4, A-4	- 0	0	175-96	175-96	l 63–96
_		e.			_	_	_	_	
_	14-21	Silt loam, fine sandy	CL-ML, GM, SM	SM A-1-b, A-4	- -	0	96-09	96-09	42-96
_		\sim			_	_	_	_	
_	21-26		CL-ML, GM, SM	SM A-1-b, A-4	_ o	0	96-091	96-0g l	42-96
_		fine sandy loam, loam			_	_	_	_	
_	26-31	Silt loam, very	CL-ML,	A-4, A-1-a,	_ _	0-33	123-90	123-90	119-90
_		gravelly fine sandy	GP-GM, GM	A-1-b	_	_	_	_	
_		loam, loam	_		_	_	_	_	
_	31 - 36	Silt loam, very	CL-ML,	A-4, A-1-b,	_ o	0-33	123-90	123-90	19 - 90
_		gravelly fine sandy	GP-GM, GM	A-1-a	_	_	_	_	
_		loam, loam	_		_	_	_	_	
_	36-60	Silt loam, gravelly	SM, GP-GM,	A-1-a, A-4,	_ _	0	133-90	133-90	127-90
_		fine sandy loam, loam	CL-ML	A-2-4	_	_			
612767									
Wellsboro,		_	_		_	_	_	_	
extremely stony	0-8	Silt loam	MI, CL	A-4	0	110-15	191-97	191-97	176-88
_	8-15	Loam, cobbly silt loam	I, CI	A-4	_ o	1 2-26	175-93	175-93	160-87
_	15-24	Silt loam, cobbly loam	-GM,	A-4	- 0	3-30	171-91	171-91	58-88
_					_	_	_	_	
_	24-29	Silt loam, cobbly loam	CI, GC-GM,	A-4	0	3-30	163-91	163-91	52-88
	0		-MI				_ ;		
	78-87	Loam, Silt loam, Cobbig	CL, SC-SM	A-4, A-1-D, A-2-4	> 	2-28	163-VB	163-98 -	41-86
	27_60	y roam 0:1+ 10:2m 00hh1::	אַטּ־טַטּ	7-1-4		000	00-09	00-09	11 06
		CODDTA			> _	0 7	20 -	20 -	0 1 1
_			_	! !	_	_	_	_	

Table 14. -- Engineering Properties -- Continued

	_		Classi	Classification	Frag	Fragments	- Pe	Percentage pas	Je pas
Map unit symbol	Depth	USDA texture					<u> </u>	sieve number	number
and soil name			 Unified	 AASHTO	>10 ri	3-10 in	4	10	40
	_					_	_		
612768	uI I				Pct	Pct			
Wellsboro,									
extremely stony	_	Loam		A-4	0	110-15	191-97	191-97	176-88
	8-15	cobbly silt		A-4	0	1 2-26	175-93	175-93	160-87
	15-24	Silt loam, cobbly loam	CI, GC-GM,	A-4	0	3-30	171-91	171-91	58-88
	1 24-29	 Silt loam cobbly loam	CI-MI		c	3-30	163-91	163-91	 52 - 88
	,	roam, copper		 -	•) 	5 -	5	200
	29-37	 Loam, silt loam, cobbly	CI, SC-SM	A-4, A-1-b,	0	5-28	163-98	163-98	41-86
_	_	y loam	· _			_	_	_	
_	1 37-60	Loam, silt loam, cobbly	ICI, SC-SM	A-4, A-1-b,	0	1 5-28	163-98	163-98	41-86
		sandy loam		A-2-4		_			
613393 Alden									
	c c		E	0	c		0	0	7
extremety stond		siigniiy decomposed plant material	4 _	o_\	>	- 	000	001	001
	1 2-7	Silt loam	IOH, ML	IA-7-5, A-6	0	0	100	175-100	169-95
	7-14	silty clay	CL, ML	A-6, A-7-6,	0	0	179-100	9-100 79-100 64-10	64-10
		silt loam, very fine		A-4					
	7.7	47 ± Com.			c		100	0	7
	14-28 	Very line sandy loam, silt loam, silty clay loam loam	С М.	A-4, A-7-6	>	- 	001-081	01-89-001-08-001-08	0 T - 60
	00-40	fine condi-	I CW	3-L-k 3-k	c		170-100	1 001-071001-	61 - 10
	20-43				>	o 	00T-6/1	001	01-10-
		loam			c				- T
	75-00	sirty cray roam, rine sandv loam, silt loam.	GC GM , CL	A-Z-4, A-7-6, A-6	>	> 	56-95	26190	- 45 - 45 - 45 - 45
613447									
Unadilla	8-0	Silt loam	MI, CL	A-4	0	0	100	95-100	84-96
	8-14			A-4	0	0	100	191-100	74-10
	14-25			A-4	0	0	100	191-100 74-10	74-10
	- :	t loar				_	_ ;	_ ;	_ ;
	25-39	Very fine sandy loam, loam silt loam	ML, CL 	A-4	0	o 	100	91-100 74-10 	74-10
	1 39-60	ndy loam,	SM, ML, CL	A-4	0	0	100	75-100 64-10	64-10
		very fine sand, very fine sandv loam, silt							
		•		_					
	_	_	_	_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragments	lents	- Pe	Percentage pas	ge pas
Map unit symbol	Depth	USDA texture			710	3-10		sieve number	number
			Unified	AASHTO	i i	in	4	10	1 40
0770	In				Pct	Pct			
Unadilla	8-0	 Silt loam	MI, CL	A-4	0	0	100	95-100	 84–96
_	8-14	loam		A-4	0	0	100	91-100 74-10	174-10
	14-25	Very fine sandy loam,	MIL, CI	A-4	0	0	100	91-100 74-10 	74-10
	25-39	Yery fine sandy loam,	MI, CI	A-4	0	0	100	91-100 74-10	174-10
_		, silt loam		_	_		_	_	_
_	39-60	sandy loam,	SM, ML, CL	A-4	0	0	100	175-100	64-10
		very fine sand, very							
		Forms							
614075									
Wurtsboro,			_ !	_ :	_ ,	•			
extremely stony	0 - 2	SlightLy decomposed plant material	_PT	- B-8 - B-8	0	0	001 -	001	001
-	2-3	Fine sandy loam	MI, SM, SC-SM	SC-SM A-2-4, A-4	0	0	187-100	174-100	59–93
	3-4	Fine sandy loam, loam	CI, SM, SC-SM A-6,	A-6, A-2-4,	0	0	187-100	87-100 73-100 57-95	57-95
	4-6	 Loam, fine sandv loam	A-4 CL, SM, SC-SM A-6,	A-4 A-6, A-2-4,	0	0	173-100	 73-100 73-100 57-95	 57–95
_		•			_		_		_
_	6-18	Sandy loam, loam, fine	SC-SM, GM, CL		0	0	150-100	150-100	133-87
		sandy loam	į			ď	_ :	- 1	-7
	18-24	Gravelly sandy loam, loam fine sandy loam	ICL, GP-GM,	A-6, A-1-a, a-1-b	 -	>	00T-6T	ZT 00T-6T 00T-6T	112-8/
-	24-33		IGC, GP-GM,	A-6, A-1-a,	0	0	124-75	124-75	116-65
_		loam, fine sandy loam		A-2-4	_		_	_	_
	33-60	Gravelly sandy loam, loam, fine sandy loam	SC-SM, SC,	A-6, A-1-a, A-2-4	0	0	133-87	133-87	22-75
	,			_ :		•			,
extremely stony	T-0	Slightly decomposed plant material	T4 -	8- 8 -	 o	0	001	001	001
	1-2	Loam	MI, GC-GM, CL	CL A-6, A-2-4,	0	0	157-97	157-97	47-87
	(;			_ ,	(- 1	_ ;
	2-3	Sandy Loam, Ilne sandy	ICL, SC-SM, GM	GM A-6, A-1-D, n-1	 -	0	78-80-	/ n - n -	146-92
_	3-4	roam Sandy loam, gravelly	CL, GM, SC-SM A-6,	A-4 A-6, A-1-b,	0	0	159-97	159-97	46-92
_		sandy		A-4	_		_	_	_
_	4-21		GM, GC-GM, CL	CL A-6, A-1-b,	0	0	154-92	154-92	41-89
		gravelly fine sandy loam		A-2-4					
	21-32	Loam, fine sandy loam,	SC-SM, SC	A-6, A-1-b	0	0	161-88	61-88	42-77
	0	elly s			_ ,	(_ ;	- 3	
	32-60	Loam, Ilne sandy Loam, gravelly sandy loam	ISC-SM, SC	A-b, A-I-D 	 -	>	88-T9-	88-191	42- / /
_			_	_	_		_	_	_

Table 14. --Engineering Properties--Continued

Dunified AANSHTO In 3-10 AANSHTO In 10 AANSHTO In AANSTTA In AANSHTO In AANSHTO In AANSTTA In AANSTTA In AANSTTA I	+in: neW	4	מייידיים ממסוד	Classif	Classification	Frag.	Fragments	Ĕ	Percentage pas	ge pas
The composed PT A-8 Decided A-8 Decided Decided A-8 Decided Decide	and soil name	Toda Toda				>10	3-10		ש א א	Tagrim II
y-eary 1.2 Singhtly decomposed PT A-8 0 0 100				Unified	AASHTO	ni n	ni n	4	10	1 40
y	620179	In				Pct	Pct			
1-2 Plant material CL-ML, ML A-4, A-6 0 0 100	Arnot, very rocky	0-1	 Slightly decomposed		A-8	°	°	100	100	1 100
1-2 Loam CLTCHI, ML A-6 0 0 100		,	plant material							-
2-3 Fine sandy loam SM, CL, SC-SMIA-4, A-1-b, 0 0 100 100 4-12 Sitt loam, very CL, GP-GC, GCR-1-a, A-6, 0 0 14-100 14-100 12-17 Sitt loam, very CL, GP-GC, GCR-1-a, A-6, 0 0 14-100 14-100 12-17 Sitt loam, extremely CL, GC, GP-GC, A-1-a, A-6, 0 0 14-100 14-100 17-80 Bedrock PT A-2	-	1-2		≥ï		o (o (001	100 100	183-90
4-12 Silt loam, very CL, GP-GC, GCA-1-a, A-6, 0 14-100		2-3	sandy	j g				100	100	80-93
4-12 Silt loam, very CL, GP-GC, GC A-1-a, A-6, 0 14-100 14-100 12-17 Silt loam, extremely CL, GC, GP-GC A-1-a, A-6, 0 0 14-100 14-100 17-80 Bedrock		λ 1.	sandy	CF,		> 	> 	00T	59-100 	48 93
12-17 Silt loam extremely CL, GC, GP-GC A-1-a, A-6, 0 14-100 14-100 14-100 17-80 Bedrock A-2-4		4-12	loam,	GP-GC,		0	0	114-100	114-100	111-93
12-17 Sith loam, extremely CL, GC, GP-GC A-1-a, A-6 0 14-100 14-100 17-80 gravelly loam	_	_		_	A-2-4	_	_	_	_	_
17-80 Gravelly loam	_	12-17	loam,	gC,		0	0	114-100	_	$\overline{}$
town, very 1-80 Bedrock			ľУ		A-2-4				_	_
y		17-80	Bedrock	!	!	<u> </u>	¦ 	<u> </u>	<u> </u> 	!
y	Lordstown, very			_						
1-2 Dear Marchial CL, SC-SM, ML A-7-5, A-4 0 100 82-100 2-3 Fine sandy loam SM, CL, SC-SM A-4, A-6 0 0 100 100 3-5 Silt loam, loam GC-GM, CL A-24, A-4 0 0 100 100 5-17 Silt loam, gravelly loam CL, GW, GC A-6, A-1-a, 0 0 4-100 4-100 17-22 Silt loam, very GW, CL, GC-GM A-6, A-2-4 0 0 4-100 4-100 17-22 Silt loam, very GW, CL, GC-GM A-6, A-2-4 0 0 4-100 4-100 10-am 36-80 Bedrock A-1-a A-1-a A-1-a 1-2 Loam SM, CL, SC-SM A-4, A-6 0 0 100 100 1-2 Loam SM, CL, SC-SM A-4, A-6 0 0 100 100 1-2 Loam SM, CL, SC-SM A-4, A-6 0 0 100 100 1-2 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 100 100 1-2 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 100 100 1-2 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 100 100 1-2 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 100 100 1-2 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 14-100 14-100 1-2 Silt loam, very CL, GP-GC A-1-a, A-6 0 0 14-100 14-100 1-2 Silt loam, very CL, GP-GC A-1-a, A-6 0 0 14-100 14-100 1-2 Silt loam, very CL, GP-GC A-1-a, A-6 0 0 14-100 14-100 1-3 Silt loam, very CL, GP-GC A-1-a, A-6 0 0 14-100 14-100 1-3 Silt loam, extremely CL, GP-GC A-1-a, A-6 0 0 14-100 14-100 1-3 Silt loam, extremely CL, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-3 Silt loam, extremely CL, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-4 Silt loam, extremely CL, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-5 CR, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-5 CR, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-5 CR, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-5 CR, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-5 CR, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-5 CR, GP-GC A-1-a, A-2-4 0 0 14-100 14-100 1-5	rocky	0-1	Slightly decomposed		A-8	0	o 	100	100	100
1-2 Loam CL, SC-SM, A-4, A-6 0 100 82-100 3-5 Silt loam, loam GC-GM, CL A-24, A-6 0 0 100 100 3-5 Silt loam, loam GC-GM, CL A-6, A-1-a, 0 0 47-100 47-100 5-17 Silt loam, gravelly loam CL, GW, GC A-1-a, A-6 0 0 47-100 47-100 17-22 Silt loam, gravelly loam CL, GW, GC A-1-a, A-6 0 0 47-100 47-100 17-23 Silt loam, very GW, CL, GC-GM A-6, A-2-4 0 0 47-100 47-100 17-24 Silt loam, very GW, CL, GC-GM A-6, A-2-4 0 0 47-100 47-100 18-45 Silt loam, very GW, CL, GC-GM A-6, A-2-4 0 0 100 100 1-2 Loam CL-ML, ML A-4, A-6 0 0 100 100 1-2 Loam SM, CL, SC-SMA-4, A-6 0 0 100 100 1-2 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 100 100 1-2 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 114-100 14-100 12-17 Silt loam, very CL, GP-GC, GC A-1-a, A-6 0 0 114-100 14-100 12-17 Silt loam, extremely CL, GP-GC A-6, A-2-4 0 0 14-100 14-100 17-80 Bedrock		,	plant material			· 				
2-3 Fine sandy Loam SM, CL, SC-SM A-4, A-6 0 0 100 100 3-5 Silt loam, gravelly loam GC-GM, CL A-6, A-1-a, 0 0 47-100 47-100 5-17 Silt loam, gravelly loam CL, GW, GC A-1-a, A-6, 0 0 4-100 4-100 17-22 Silt loam, gravelly loam CL, GW, GC A-1-a, A-6, 0 0 4-100 4-100 17-22 Silt loam, very GW, CL, GC-GM A-6, A-2-4, 0 0 4-100 4-100 18-80 Bedrock		1-2	•	SC-SM,	, '	o (o (100	182-100	06-891
5-17 Silt loam, gravelly loam CL, GW, CL A-2-4, A-4, 0 0 4/1-100 4/1-100 5-17 Silt loam, gravelly loam CL, GW, GC A-6, A-1-a, 0 0 4-100 4-100 17-22 Silt loam, gravelly loam CL, GW, GC A-6, A-2-4, 0 0 4-100 4-100 17-22 Silt loam, very GW, CL, GC-GM A-6, A-2-4, 0 0 4-100 4-100 10-3m A-1-a		2-3	sandy	CL, SC-SM	₫,	o	o	100		
5-17 Silt loam, gravelly loam CL, GW, GC A-1-a, A-6, A-1-a, A-1-		3-5	loam,	ď		o 	o 	147-100		
17-22 Silt loam, gravelly loam CL, GW, GC A-1-a, A-6, 0 0 4-100 4-100 22-36 Silt loam, loam, very GW, CL, GC-GM A-6, A-2-4, 0 0 4-100 4-100 10am		5-17	loam, gravelly	GW, GC	A-6, A-1-a,	0	o 	4-100		3-93
17-22 Silt loam, gravelly loam CL, GW, GC A-1-a, A-6, 0 4-100 4-100 22-36 Silt loam, very GW, CL, GC-GM A-6, A-2-4, 0 0 4-100 4-100 10-am	_			_	A-4	_	_	_	_	_
22-36 Silt loam, loam, very GW, CL, GC-GM A-6, A-2-4, 0 0 4-100 4-100 loam		17-22	loam, gravelly	GW, GC		o 	o 	4-100		3-93
Gravelly fine sandy A-1-a I I I I I I I I I		22-36		CI,		0	0	4-100	_	3-98
36-80 Bedrock			44		1					
		36-80	Bedrock	:	!					
	081009									
plant material	Arnot	0-1			A-8	0	0	100	100	100
Loam	_	_	plant material	_		_	_	_	_	_
Fine sandy loam SM, CL, SC-SM A-4, A-6 0 0 100 100 Fine sandy loam SM, CL, SC-SM A-4, A-1-b, 0 0 100 59-100 A-6	_	1-2	Loam	≊		0	0	100	100	183-90
Fine sandy loam SM, CL, SC-SM A-4, A-1-b, 0 0 100 59-100		2-3	sandy	CI,		o _	0	100	100	180-93
Silt loam, very CL, GP-GC, GC A-a, A-6, 0 0 14-100 14-100 Gravelly loam		3-4	sandy	CL,		o 	o 	100	159-100	148-93
gravelly loam	_ _	4-12	loam,	GP-GC,		0	o 			 11-93
Silt loam, extremely CL, GC, GP-GC A-6, A-2-4, 0 0 14-100 14-100			relly l			_				_
gravelly loam Bedrock		12-17	loam,	gc,		0	0	114-100	_	111-93
		-	lУ	_	A-1-a					_
		17-80	Bedrock			<u> </u>	<u> </u>	<u> </u>	<u> </u>	!

Table 14. -- Engineering Properties -- Continued

			Classif	Classification	Fragm	Fragments	Pe	Percentage pas	re pas
Map unit symbol	Depth	USDA texture					. –	sieve	number
and soil name			Unified	AASHTO	 0 ti 	3-10 in	4.	10	40
620180	In				Pct	Pct			
Lordstown	0-1	 Slightly decomposed plant material	T.A.	A-8	0	0	100	100	100
	1-2	_	CI, SC-SM, MI	ML A-7-5, A-4	0	0	100	82-100	06-89
	1 2-3	sandy loam	CI, SC-	ď	0	0	1000	100	80-93
	3-5	Silt loam, loam	GC-GM, CL	A-2-4, A-4,	0	0	47-100	47-100	138-93
	5-17	 Silt loam, gravelly loam CL,	GW, GC	A-6 A-6, A-1-a,	 0	0	4-100	4-100	3-93
	 17-22	 Silt loam, gravelly loam CL,	CI, GW, GC	A-4 A-1-a, A-6,	 0	0	 4-100	4-100	3-93
	22-36	Silt loam, loam, very gravelly fine sandy loam	GW, CL, GC-GM A-6, A-1 A-1	A-6, A-2-4, A-1-a	 o	o 	4-100 	4-100	86-8
	36-80	<u> </u>		-				-	-
620181			- -						
Arnot	0-1	Slightly decomposed plant material	I I	A-8	0	0	1000	100	100
	1-2	Loam	CL-ML, ML	A-4, A-6	0	0	1 100	100	83-90
	1 2-3	Fine sandy loam	SM, CL, SC-SM A-4,	A-4, A-6	- 0	0	100	100	180-93
	3-4	Fine sandy loam	SM, CL, SC-SM A-4,	A-4, A-1-b,	- 0 -	0	1000	59-100	48-93
	4-12			A-6 A-1-a A-6			114-1001		111-03
	1 r	relly loam	ò		 -	· 		1	1
	12-17	extremely	CL, GC, GP-GC A-6,	A-6, A-2-4,	0	0	114-100 1	14-100	11-93
	1 17-80	gravelly loam Bedrock	- -	A-1-a	 ¦		 ¦		
	_		_		_	_	_		
Lordstown	0-1	Slightly decomposed plant material	PT I	≱ −8	 o	o 	100	100	100
	1-2	Loam	χ,	ML A-7-5, A-4	- 0	0	100	82-100	168-90
	1 2-3	sandy loam	, sc	-SM A-4, A-6	- 0 -	0	100	100	80-93
	3-5	Silt loam, loam	GC-GM, CL	A-2-4, A-4,	- 0 -	0	47-100	47-100	38-93
	5-17	 Silt loam. gravelly loam CL.		A-6 A-6, A-1-a.	 	0	 4-100	4-100	3-93
	i) - –	7110001 (mp)1)		· -	· 	 -	1)
	17-22	Silt loam, gravelly loam CL,	GW, GC	A-1-a, A-6,	0	0	4-100	4-100	3-93
	72-36		A-4 	A-4 a-6 a-2-4			4-1001	4-100	3-08
	} 	fine sandy	Ì	l od					
	1 36-80	Loam Bedrock	-		 ¦		 	-	-
	_	_	_		_	_	_		_

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragn	Fragments	Pe	Percentage pas	ge pas
Map unit symbol	Depth	USDA texture			7	3-10		sieve number	number
			Unified	AASHTO	d i	, i	4	10	40
623089	In				Pct	Pct			
Chippewa, extremely stony	0-2	 Slightly decomposed		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0	o 	100	100	100
	2-4	plant material Silt loam	Ğ.	 A-6	0	0	100	100	 91–10
	4-8	Silty clay loam, loam,	CI	A-7-6, A-6	0	0	196-100	96-100 96-100 83-99	83-99
	8-13	lay loam, c	CI	A-7-6, A-6	0	0	192-100	92-100 92-100 79	179–99
	13-21	Loam, silt loam, loam, loam,	CL, CL-ML	A-4, A-7-6,	0	0	193-100	93-100 93-100 75-10	75-10
		clay loam		0-4-					
	21-29	Silty clay loam, clay loam, loam, silt loam,	CL, CL-ML 	A-4, A-7-6, A-6	0	o 	93-100 	93-100 93-100 75 	75-10
	29-34	fine sandy loam Loam, silty clay loam,	 GC-GM, CL	 A-2-4,		o 	146-100	 6-100 46-100 37-10	 37-10
		sandy loam,		A-7-6, A-6					
_	34-60	ilty	CL, SM, SC-SM	SC-SM A-1-a,	0	0	100	40-100 30-10	30-10
		silt loam, fine sandy loam, clay loam		A-7-6, A-4					
623109									
Farmington	0-1	Slightly decomposed plant material	_PT	A-8	 o	o 	100	100	100
	1-3	Silt loam	ML, CL	A-4	0	0	190-1001		
	3-6	Fine sandy loam, very fine sandy loam, silt	GM, CL 	A-4	0	o 	62-91 	62-91 	50-91
_		n, loam		_			_		
	9-15	Fine sandy loam, very fine sandy loam, silt	GM, CL 	A-4 	 o	o 	62-91 	62-91 	50-91
	7 L	loam, loam							
	0	40000000000000000000000000000000000000	 						
624811 Galwav, verv									
	0-2	Slightly decomposed	Td.	A-8	0	0	100	100	100
	2-3	Moderately decomposed	LA.	8-8	0	0	100	100	100
	3-5	Pranc materiar Loam	 ML, CL-ML	 A-4	0	0	188-1001	 88-100 73-90	73-90
_	5-15	Fine sandy loam, silt	SM, SC,	CL A-1-a, A-4	0	0	117-100		13-98
	15-24	loam, gravelly loam Fine sandy loam, silt	 GP-GM, GC, CL	 CL A-1-a, A-4	 0	o 	117-100	 17-100 17-100 13-98	 13-98
	24-80	, gravelly]	. !						
	9								

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragi	Fragments	P.	Percentage pas	Je pas
Map unit symbol and soil name	Depth 	USDA texture 			710	3-10		sieve number	umber
	. _ _		Unified	AASHTO		ni -	4	10	40
624813	In				Pct	Pct			
Lackawanna, extremely stony	0-2	 Slightly decomposed	FT	 A-8	o . 	o 	100	100	100
	_	plant material		_	_	_	_		
	2-3	fine sandy	Z	4	5-23	113-23	159-100	159-100	48-10
	3-7	Cobbly fine sandy loam 	CL, SM, CL-ML A-6,	A-6, A-2-4, a-4	3-23	3-23	96-77	96-14	63-96
_	1 7-8	 Cobbly fine	ML	-	3-23	3-30	156-96	96-99	46-96
	8-16	Fine sa	CL, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	26-96	96-99	43-96
_ =	16-24	loam, stony loam Stony loam, fine sandy	A-4 CL. GM. CL-ML A-6.	A-4 A-6, A-2-4,	3-23	1 3-30	156-96	56-96	43-96
	: :	l loam, silt loam	Ì		} - -	; - -			
	24-29	Loam, sandy loam, stony	CL, SM, SC-SM A-6,	A-6, A-2-4,	2-17	1 2-22	166-98	86-99	51-98
	_	fine sandy loam, silt		A-4	_		_		
	_				_	_	_		
_ 	29-60 	Silt loam, loam, sandy loam, very cobbly fine	CL, SM, GC-GM A-6, 	A-6, A-2-4, A-4	2-17 	2-22 	66-99 	86-99	51-98
		sandy loam							
624816 Lordstown verv									
rocky	0-1	Slightly decomposed	PT	A-8	0	0	100	100	100
_	_	plant material		_	_	_	_		
	1-2		SC-SM,	ML A-7-5, A-4	0	o _	100	82-100	68-90
	1 2-3	Fine sandy loam	_	SC-SM A-4, A-6	0	o _	100		80-93
	3-2	Silt loam, loam	GC-GM, CL	A-2-4, A-4,	o 	o 	47-100	47-100	38–93
	5-17	 Silt loam, gravelly loam CL,	CL, GW, GC	A-6 A-6, A-1-a,	o 	0	4-100	4-100	3-93
	_				_	_	_		
	17-22	Silt loam, gravelly loam CL,	CI, GW, GC	A-1-a, A-6, A-4	o 	o 	4-100 	4-100	3-93
	22-36	loam, very	GW, CL, GC-GM A-6,	A-6, A-2-4,	o 	o 	4-100	4-100	3-98
- -		gravelly fine sandy loam		A-1-a 					
	1 36-80	Bedrock	:	<u> </u>	<u> </u>	<u> </u>	 		
_	_	_			_		_		

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragm	Fragments	l Pe	Percentage pas	ye pas
Map unit symbol	Depth	USDA texture				7	-	sieve number	number
and soll name			 Unified	AASHTO	 0 4i 	3-10 in	4	10	1 40
624816	In				Pct	Pct			
wallpack, very rocky	0-1	Slightly decomposed	LA.	A-8	0	0	100	100	100
	1-2	plant material Gravelly silt loam	I Isc, он	 A-5, A-4	 0	0	100	 61–91	 55–89
_	2-2	Sandy loam, fine sandy			0	0	163-91	63-91	51-91
		loam, gravelly silt							
- -	5-18	Fine sa	CL, GC-GM	A-6, A-4	 0	0	64-92	64-92	52-92
		loam, loam, gravelly							
_	18-24	<u>=</u>	CL, GC-GM, GC	GC A-1-b, A-6	0	0	145-79	45-79	136-79
		loam, silt loam, gravelly loam							
_	24-42	Fine sandv loam. sandv	I GC-GM. CI.	IA-2-4. A-6	0	0	146-80	146-80	36-80
	! : 	, gravelly s			. <u> </u>	•	; :	3	
	42-60	Loam, Loam Fine sandv loam sandv	LU MU-JUI	 a-1-b a-6		c	145-79	145-79	136-79
	}	, silt loam,			, _	•	2 _	2 _	
		gravelly loam	_						
624822									
Lordstown	0-1	Slightly decomposed	PT	A-8 	0	0	100	100	100
_	1-2	Loam	CI, SC-SM, ML	ML A-7-5, A-4	0	0	100	82-100	168-90
_	2-3	Fine sandy loam	CI, SC.	A-4, A-6	0	0	100	100	80-93
	3-5		GC-GM, CL	A-2-4, A-4,	0	0	147-1001	47-100	138-93
	-			A-6			_ ;		_ ;
	5-17	Silt loam, gravelly loam CL,	CL, GW, GC	A-6, A-1-a, A-4	 o	0	4-100 	4-100	8-83
_	17-22	Silt loam, gravelly loam CL,	CL, GW, GC	A-1-a, A-6,	0	0	4-100	4-100	3-93
	1 22-36	 Silt loam, loam, verv	 GW, CL, GC-GM A-6,	A-4 A-6, A-2-4,	 0	0	 4-100	 4-100	3-98
_		fine sandy		- 1	_		_	_	_
	36-80	loam	: 		 :		; 	¦ 	 - -
- -				- -					

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragi	Fragments	Pe	Percentage pas	Je pas
Map unit symbol	Depth	USDA texture			710	3-10	-	sieve number	umber
			Unified	AASHTO	ni n		4	10	40
624622	In				Pct	Pct			
Wallpack	0-3	Silt loam	GC, CL	A-4, A-6, A-2-4	0	0	35-100	35-100 35-100 31	31-96
	3-9	Gravelly silt loam	GC, CL	A-4, A-6, A-2-4	0	0	35-100	35-100 35-100 31	31-95
	9-16	Fine sandy loam, sandy loam, loam, gravelly	CL, GM	A-1-b, A-6	0	0	39-100	39-100	30-10
	16-25		SM, CL	A-1-b, A-6	0	0	71-100	41-100	32-10
	25-65	Loam, sandy loam, fine sandy loam, very gravelly silt loam	CL, SP, SC	A-6, A-1-a 	0	0	53-100	7-100	5-10
624823									
Lordstown	0-1	Slightly decomposed plant material		A-8	o 	o 	1000	100	100
	1-2		SC-SM,	ML A-7-5, A-4	0 0	0 0	100	0	68-90
_	3-5	Fine sandy loam Silt loam, loam	GC-GM, CL	-SM A-4, A-6 A-2-4, A-4,	0	- o	100 47-100	47-100	38-93
	1		į	A-6	-				Ċ
_	71.0	Sile loam, gravelly loam CL, 	CL, GW, GC	A-4 A-4	> 	- 	- T - T		
	17-22	Silt loam, gravelly loam CL,	CL, GW, GC	A-1-a, A-6,	0	0	4-100	4-100	3-93
	22-36	, loam	GW, CL, GC-GN	GC-GM A-6, A-2-4,	0	• •	4-100	4-100	3-98
-		gravelly fine sandy loam		A-1-a 					
	36-80	Bedrock		<u>-</u> -					
Wallpack	0-3	Silt loam	GC, CL	A-4, A-6, A-2-4	0	0	35-100	35-100	31-96
	9-8	Gravelly silt loam	GC, CL	A-4, A-6,	0	0	35-100	35-100 35-100 31-95 	31-95
	9-16	Fine sandy loam, sandy loam, loam, gravelly	CI, GM	A-1-b, A-6	0	0	39-100	9-100 39-100 30-10	30-10
	16-25	Fine sandy loam, sandy loam, gravelly silt	SM, CL	A-1-b, A-6	0	o 	71-100	41-100	32-10
	25-65		CL, SP, SC	A-6, A-1-a 	0	0	53-100	7-100	5-10
		_		-			_		

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Frag	Fragments	- Pe	Percentage pas	ge pas
Map unit symbol	Depth	USDA texture				,	-	sieve	number
and soil name			Unified	AASHTO	V10 ni	3-10 in 	4	10	1 40
624824	In				Pct	Pct			
Lordstown	0-1	Slightly decomposed	PT	A-8	0	o 	100	100	100
_	1-2	Loam	CL, SC-SM, ML	ML A-7-5, A-4	0	0	100	182-100	168-90
_	1 2-3	Fine sandy loam	CI, SC	-SM A-4, A-6	0	0	100	100	180-93
	3-5	loam,	GC-GM, CL	A-2-4, A-4,	0	0	147-100	47-100	138-93
	5-17	 Silt loam, gravelly loam CL, 	CI, GW, GC	A-0 A-6, A-1-a, a-4	0	o 	4-100	4-100	3-93
- 	17-22	 Silt loam, gravelly loam CL,	CI, GW, GC	A-1-a, A-6, A-4	0	0	4-100	4-100	3-93
- 	22-36	Silt loam, loam, very gravelly fine sandy	GW, CL, GC-GM A-6,	A-6, A-2-4, A-1-a	0	0	4-100	4-100	3-98
	_	loam		_		_	_	_	_
	36-80	Bedrock			!	:	:		
Wallpack	0-3	Silt loam	GC, CL	A-4, A-6,	0	0	135-100	35-100	31-96
- •		:		- 4-7-4 -	•				
	ຄ ເ 	Gravelly silt loam 	GC, CL	A-4, A-6, A-2-4	0	o 	35-100 	35-100 	31 – 95
- -	9-16		CL, GM	A-1-b, A-6	0	o 	39-100 	39-100 39-100 30-10 	30-10
	16-25	Silt loam	- N		c		171-100	141-1001	1 32 - 1 0
- 	C N L D L L D L D L D L D L D L D L D L D	sandy loam, 1, gravelly s 1, loam			>			-	35
	25-65	Sandy loam, fine sandy loam, very gravelly silt loam, loam	CI, SP, SC	A-6, A-1-a	0	0	53-100 	7-100	5-10
624826									
Manlius, very	_	_		_		_	_	_	_
rocky	0-1	Slightly decomposed plant material	PT	- 	0	o 	100	100	100
_	1-2	Very channery silt loam	ML	A-4	0	8-32	153-91	52-91	146-87
	1 2-18	emely	CL, GC, GC-GM A-4,	A-4, A-2-4,	0	118-40	135-79	134-78	129-76
-	_	•				_	_	_	_
	1 18-27	Loam, extremely	GC, GC-GM	A-4, A-1-b, a-2-4	0	31-39	137-57	35-56 	30–55
	27-80		!		1	-	-	-	
_	_	_		_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Class	Classification	Frag	Fragments	P.	Percentage pas	ge pas
Map unit symbol and soil name	Depth 	USDA texture 		_	>10	1 3-10		sieve	number
			Unified	AASHTO	l ri		4	10	1 40
624826	In				Pct	Pct			
Nassau, very rocky	0-1	Slightly decomposed	_ F9	 A-8	°	o 	100	100	1 100
	1-2		, G		o	0-32	 53-100		52-100 46-96
-	2-15	Loam, extremely channery silt loam	GC-GM', CL', G(GC A-4, A-1-b, A-2-4	o 	18-40 	35-79 	34-78 	29-76
	15-80	Bedrock					<u> </u>		
624827 Nassau, very rocky	0-7 7-13	 Very channery silt loam Loam, extremely channery silt loam	MI, CL, GC CL, GC-GM, GC	A-4 GC A-4, A-1-b, A-2-4	00	0-32 18-40 	 53-100 35-79 	53-100 52-100 46-96 35-79 34-78 29-76	46-96 29-76
- -	3								
Manlius, very rocky	9-20	 Very channery silt loam Loam, extremely channery silt loam	-GM ,	 A-4 GC A-4, A-2-4, A-1-b	o o	 8-32 18-40 	 53-91 35-79 	 52-91 34-78 	 46-87 29-76
_ 	20-29	Loam, extremely channery silt loam Bedrock	GC-GM, GC 	A-4, A-1-b, A-2-4 	o 	131-39	137-57	35-56	30-55
624828									
Nassau, very rocky	0-7	 Very channery silt loam Loam, extremely	 ML, CL, GC CL, GC-GM, G	 A-4 GC A-4, A-1-b,	。。 	 0-32 18-40	 53-100 35-79	 52-100 46-96 34-78 29-76	 46-96 29-76
	13-80	channery silt loam Bedrock	¦ 	A-2-4 	¦ 				
Manlius, very rocky	0-9 0-20 0-29	Very channery silt loam Loam, extremely channery silt loam Loam, extremely channery silt loam	MI, GC CI, GC-GM, GG GC-GM, GC	A-4 A-4 A-1-b A-1-b A-4, A-1-b, A-2-4	00 0	8-32 18-40 31-39	53-91 35-79 37-57	52-91 34-78 35-56	46-87 29-76 30-55
	29-80	Bedrock -	¦ 	¦ 	¦ 	¦ 	 	¦ 	<u> </u>
624829 Nassau, very rocky	0-7 7-13 13-80	 Very channery silt loam Loam, extremely channery silt loam Bedrock	MI, CL, GC CL, GC-GM, GG	A-4 GC A-4, A-1-b, A-2-4	00	0-32 18-40 	53-100 35-79 	52-100 34-78	46-96 29-76

Table 14. -- Engineering Properties -- Continued

To The second	1		Classi	Classification	Frac	Fragments	<u>а</u>	Percentage pas	ge pas
and soil name	l pepui	OSDA CEXCUTE		_	710	1 3-10		S L C	sieve number
			Unified	AASHTO		 ni	4	10	1 40
624829	In				Pot	Pct			
Manlius, very rocky	0-9	 Very channery silt loam Loam, extremely	 MI, GC CI, GC-GM, GC	 A-4 GC A-4, A-2-4,	00	 8-32 18-40	 53-91 35-79	 52-91 34-78	 46-87 29-76
	20-29		M, GC		0	131-39	137-57	35-56	 30-55
	1 29-80	Claimery Sirc roam Bedrock	¦ 	 		¦ 	:	¦ 	¦
624832 Nassau	0-1	Slightly decomposed	T-D-	A-8	0	0	100	100	100
	1-2	plant material Very channery silt loam Toam extremely	 MI, CI, GC GC-GM CI. GC	 A-4 C a-4 a-1-b	00	0-32	 53-100 35-79	 52-100 46-96 34-78 29-76	 46-96 29-76
	15-80								
624841 Oquaga	0-1	 Slightly decomposed	- E-	 - 8	0	0	100	100	100
	1-4	plant material Channery loam	 SC-SM, ML	 A-7-5, A-4		 4-18	 78-96	177-96	 66–89
_	4-20	Fine sandy loam, very channery loam, silt	_	GM A-6, A-1-b, A-4	o 	118-36	144-78	143-77	33-77
	20-25	loam,	 CL, GP-GM, GC-GM	 A-6, A-2-4, A-1-a	0	123-46	 14-70 	 12-70 	9-70
	1 25-80	channery loam, silt loam loam		:					
624845 Farmington	0-1	Slightly decomposed	_ PT	 	0	o 	100	100	100
	3-9	plant material Silt loam Fine sandy loam, very fine sandy loam, silt	ML, CL GM, CL 	A-4 A-4	o o 	o o 	 90-100 62-91	 90-100 62-91 	 80-96 50-91
	 9-15 	<pre> loam, loam Fine sandy loam, very fine sandy loam, silt</pre>	 GM, CL 	 A-4 	o 	。 	 62-91 	 62-91 	 50-91
	 15-80 	loam, loam Bedrock 							

Table 14. -- Engineering Properties -- Continued

	1		Classif	Classification	Fragi	Fragments	Pe	Percentage pas	ye pas
map unit symbol and soil name	l Depth	OSDA CEXCUTE			>10	3-10		sieve number	number
			Unified	AASHTO	ni n	ni n	4	10	40
624845	In				Pct	Pct			
Galway	0-2	Slightly decomposed	T4	A-8	0	0	100	100	100
	2-3	Moderately decomposed	PT	A-8	0	0	100	100	100
	3-5	prancima certari Loam	MI, CL-MI	A-4	0	0	188-100	88-100	73-90
	5-15	Fine sandy loam, silt	GM, SC,	CL A-1-a, A-4	0	0	117-100	17-100 17-100 13-98	13-98
_	15-24	loam, gravelly loam Fine sandy loam, silt	 GP-GM, GC, CL	 CL A-1-a, A-4	0	0	117-100	 17-100 17-100 13-98	ا 113–98
	24-80	loam, gravelly loam Bedrock							
624846									
Arnot	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100
	1-2		ML, ML		0	0	100	100	83-90
	2-3	sandy	CĽ,		0	0	100	100	80-93
	3-4	Fine sandy loam	SM, CL, SC-SMA-4,	A-4, A-1-b,	o 	o 	100	59-100	48-93
	4-12	 Silt loam, werv	 CL, GP-GC, GC	A-6 GC A-1-a, A-6,	0	0	114-100	 4-100 14-100 11-93	111-93
		relly			_	_	_		
	12-17		CL, GC, GP-GC A-6,	A-6, A-2-4,	0	0	114-100	14-100 14-100	111-93
_	17-80	gravelly loam Bedrock	 ¦	A-1-a 			 		
626816									
Udifluvents,	_							_	
occasionally	0			K - C - K			-	5	74-04
50011	3-16	Loamy	- SM. SM.	A-2-4	o c	o c	100	1 100	74-84
	16-22	Sandy	, sc.	SCIA-6, A-2-4,	0		100	100	170-86
	72-27		SM: SC-SM: SC-	SCIA-6 A-2-4	c	c	100	100	70-86
	i 				· - –	, _))
	27-32	Sandy loam	SM, SC-SM, SC	SC A-6, A-2-4,	0	0	100	100	170-86
	32-60	atified	SC-SM, SM	A-2-4	0	0	100	100	74-84
		to sandy loam 							

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Frag	Fragments	- P	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture 				1 3-10		sieve number	number
			Unified	AASHTO	ni I	ni ni	4	10	1 40
635458	In				Pct	Pct			
Oquaga, very		_				_		_	_
rocky	0-1	Slightly decomposed plant material	I P.T.	A -8	o 	o 	100	100	100
_	1-4	Channery loam	SM, ML	Ŋ	0	4-18	178-96	96-44	166-89
	4-20	, loam,	CL, GC-GM, GM	GM A-6, A-1-b,	0	118-36	144-78	143-77	133-77
		channery Loam, silt loam		A-4					
	20-25	Fine sandv loam, sandv	CI, GP-GM,	A-6, A-2-4,	0	123-46	114-70	112-70	9-70
-		, extremely		- 1		: ! -	: - -	<u> </u>	
		channery loam, silt							
- -	25-80	Bedrock	-	-	¦ - –		¦ - –		-
	_								
morra modernia	, -		E	Q I					1
VELY LUCKYV	N I O	silgnery decomposed rlant material	14 _	0 4	> 	- 	001	201	001
	2-3	Cobbly fine sandy loam	GM, ML	A-2-4, A-4	5-23	13-23	159-1001	59-100 48-10	48-10
_	3-7	fine sandy	CL, SM, CL-ML A-6,	Ā	3-23	3-23	96-22		163-96
_					_	_	_	_	_
	7-8	y fine sandy	Ħ (, '	3-23	3-30	156-96	156-96	146-96
_	9T-8	Fine sandy loam, silt loam stony loam	CL, GM, CL-ML A-6, 	A-6, A-2-4, A-4	3-23	3-30	56-96 	96-96	43-96
-	16-24	Hino canda losm cil+	A - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	7 - Z - Z - Z - Z - Z - Z - Z - Z - Z -	3-23	3-30	156-96	156-96	143-96
	r N O H	sandy roam, 1, stony loam	Ś))) - –	2 _	2 -) - -
_	24-29	Loam, sandy loam, stony	ICI, SM, SC-SMIA-6,	A-6, A-2-4,	2-17	1 2-22	166-98	166-98	151-98
_		sandy loam,				_	_	_	_
_	_			_	_	_	_	_	_
_	1 29-60	oam, loam, sa	CL, SM, GC-GM A-6,	A-6, A-4,	2-17	2-22	86-991	86-991	51-98
			_	A-2-4					_
		sandy loam 							
635459									
Oquaga, very	_	_	_	_	_	_	_	_	_
rocky	0-1	Slightly decomposed	I P.T.	A-8	0	o 	100	100	1 100
- •	-	prant material	70 00				70	70 66	-
	1 T	Channery loam Fire cond: 100m ::0m:	LOCIONAL MIL	P-V 'C-/-W	o c	110-26	7 2 1 7 0	00-11	00 00
	0 0 1 1	salidy nerv l	, EB - 75		> 	00101	0 	/ / I C # -	, , , , , , ,
_								_	
_	20-25	Fine sandy loam, sandy	CL, GP-GM,	IA-6, A-2-4,	0	123-46	114-70	112-70	1 9-70
_	_	loam, extremely	GC-GM	A-1-a	_	_	_	_	_
_		channery loam, silt	_	_	_	_	_	_	_
	00	loam				_	- -		_
	00107	- Degrees			! !	¦ 	 	<u> </u> 	
-		_	_	_	_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

Man truit avmbol	Denth	IISDA texture	Classif	Classification	Fragi	Fragments	- - -	Percentage pas	ge pas
and soil name	i di				>10	1 3-10		D > D - D - D - D - D - D - D - D - D -	
			Unified	AASHTO	ni n	ni n	4	10	40
635459	In				Pot	Pct			
Lackawanna,			_	_			_		
very rocky	0-2	Slightly decomposed	Tal.	A-8	0	0	1000	1000	100
_	2-3	Prame material Cobbly fine sandy loam	GM, ML	A-2-4, A-4	5-23	113-23	159-1001	59-100	 48-10
	3-7	fine sandy	SM, CL-ML	A-6, A-2-4,	3-23	3-23	196-771		
_	7-8	 Cobbly fine sandv loam	GM, MI	A-1-b, A-4	3-23	1 3-30	156-96	56-96	 46–96
	8-16	andy loam, s		A-2-	3-23	3-30	156-96	96-95	43-96
-		n, stony loam 	į						
	16-24	Fine sandy Loam, silt	CL, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	56-96 -	96-96	143-96
_	24-29	Loam, stony loam, stony	CI, SM, SC-SMIA-6,	A-6, A-2-4,	2-17	1 2-22	86-99	86-99	 51–98
		sandy loam,							
- -	29-60	loam Silt loam, loam, sandy	 CL, SM, GC-GM A-6,	A-6, A-4,	2-17	1 2-22	86-991	86-991	 51–98
		loam, very cobbly fine sandy loam		A-2-4					
_			_				_	_	
740953 Delaware									
rarely flooded-	0-1	Slightly decomposed	PT	A-8	0	0	100	100	100
_	,	nt mate			_	_	_ :		_ ;
	1-4		CL-ML, SM	A-2-4, A-4	o c	o c	95-100	90-1001	180-10
_	11-20	Fine sandy loam	SC-SM	4 .	o o		195-1001		181-10
	20-33	sandy	Ĭ, ĭ,	ì	0	0	196-1001	91-100	81-10
_	33-41	sandy	SM	A-2-4, A-4	0	0	195-1001		179-1
_	41-56	Loamy sand, loam, fine	CL-ML, SM, CL	CL A-2-4, A-4	0	0	195-100	95-100 90-100 77-1	177-10
		y loam	į		·				
	26-60	Loamy sand, fine sandy loam, loam 	SM, CL, CL-ML A-4 	A-4	o 	o 	95-100 91 	97 001-16	179-10
740968			- -	_			- -		
Nassau, very				_	_	_	_		_
rocky	0-7	Very channery silt loam	ML, CL, GC		0 0	0-32	53-100	52-100 34-78	146-96
	CT - /	LOAMIN, EXCLEMELY Channers	, EB 1 7 5	A-1-D, A-2-4	> _	* 0 -	6/100-		0/167
- -	13-80	1 1 2			-		- - -		
_		_	_	_	_	_	_	_	_
Manlius, very			(-
rocky	0 C C C C C C C C C C C C C C C C C C C	Very channery silt loam	IMI, GC	A-4 A-7-4 A-4	o c	1 8 - 32	153-91	152-91	146-87
_	2	- 5	5	- 1	· - –	2	2 _		2
_	20-29	remely	GC-GM, GC	A-4, A-1-b,	0	131-39	137-57	35-56	30-55
	6	channery silt loam		A-2-4					
	78-80 8-80	bearock		- -	<u> </u> - 	¦ 	 : 	 -	! ! !
-		_	_	_	_	_	_	_	

Table 14. -- Engineering Properties -- Continued

4: 4: 4: 4: 4: 4: 4: 4: 4: 4: 4: 4: 4: 4	1	4.021	Classi	Classification	Frag	Fragments	Pe	Percentage pas	ge pas
and soil name	n Depui	- CSDA CEXCUIA			>10	1 3-10		2 4 4	numer
			Unified 	AASHTO	ni n	ni n	4.	10	40
740969	In				Pct	Pct			
Nassau, very			į	_ :					
rocky	0-7 7-13	Very channery silt loam Loam, extremely	ML, CL, GC CL, GC-GM, GC	A-4 GC A-4, A-1-b,	o o	0-32 18-40	53-100 35-79	53-100 52-100 46-96 35-79 34-78 29-76	46-96 29-76
_	_	channery silt loam		- 1	_	_	_	_	_
	13-80	Bedrock 	<u> </u>		¦ 	¦ 	<u> </u> 	¦ 	
Manlius, very						_			
rocky	6-0	Very channery silt loam	IMI, GC	A-4 GC A-4 A-2-4	0 0	8-32 118-40	53-91 35-79	152-91	146-87
_	;	ဌ		- 1	, - –	2) - -	: - -)
	1 20-29		GC-GM, GC	A-4, A-1-b,	0	131-39	137-57	35-56	30-55
- -	1 29-80	cnannery siit loam Bedrock	-	A-2-4					
740971									
Oquaga, very	_	_							
rocky	0-1	Slightly decomposed	PT 	A-8	0	0	1 100	100	1 100
-	7-1	Channer Macerian	I OC LOW MT	N-4 7-7-4		η-1 α-1 α-1	178-96	90-22	- 66-80
	4-20	Fine sandy loam, very	-	- 5	o o	118-36	144-78	143-77	33-77 33-77
- -		mery roam,							
	20-25		CL, GP-GM,		o 	123-46	114-70	112-70	02-6
 .		loam, extremely channery loam, silt 	思 り つり 一	A-1-8					
-	, i	Loam							
	08-67	bearoak 	! !	!	<u> </u>	¦ 	: 	¦ 	<u> </u>
Lackawanna,			!	!		· - — ·	. —		
very rocky	N - 0	Siightiy decomposed plant material	T4 -	8- 4 -8	> 	> 	00T -	00T -	001
	1 2-3	Cobbly fine sandy loam	ML	4	5-23	113-23	159-100	_	
	3-7	Cobbly fine sandy loam	CL, SM, CL-ML	CL-ML A-6, A-2-4,	3-23	3-23	96-771	96-77	63–96
	7-8	 Cobbly fine sandv loam	I GM. MI.	A-1-b. A-4	3-23	3-30	156-96	156-96	146-96
_	8-16		GM,	- 5	3-23	3-30	96-95	96-95	143-96
_	_	loam, stony loam	_	A-4	_	_	_	_	_
	16-24	Fine sandy loam, silt	CL, GM, CL-ML	CL-ML A-6, A-2-4,	3-23	3-30	96-95	96-99	143-96
-		, stony loam	į	A-4	7	, ,	- 0	- 0	- 1
	24-29	Loam, Sandy Loam, Stony fine sandy loam, silt	Ch, SM, SC-SM A-6, A-4		/T_7	77_7	06-00-	06-00-	06_TC
	_						_	_	_
	29-60	Silt loam, loam, sandy loam, very cobbly fine	CI, SM, GC-GM -	GC-GM A-6, A-4, A-2-4	2-17	2-22	86-99	86-991	51–98
		sanay toam 							

Table 14. -- Engineering Properties -- Continued

			Classif	Classification	Frag	Fragments	J.	Percentage pas	ge pas
Map unit symbol and soil name	Depth 	USDA texture 			>10	3-10		sieve number	number
			Unified	AASHTO	ni n	ni n	4	10	1 40
740972	In				Pct	Pct			
Oquaga, very rocky	0-1	 Slightly decomposed plant material	Тd	A-8	o 	o 	100	100	100
	1-4	-	SC-SM, MI CL, GC-GM, GM	A-7-5, A-4 GM A-6, A-1-b,	00	118-36	178-96	177-96	66-89 33-77
		cnannery loam, silt loam		A-4					
	20-25	Fine sandy loam, sandy	CL, GP-GM,	A-6, A-2-4,	0	123-46	114-70	112-70	9-70
				в - т - с					
	25-80	Bedrock			:	¦ 			-
Lackawanna,									
very rocky	0-2	Slightly decomposed plant material	LA	A-8	o 	o 	100	100	100
	2-3	fine sandy	ML	작	5-23	113-23	159-100		48-10
	3-7	Cobbly fine sandy loam 	CL, SM, CL-ML A-6, 	A-6, A-2-4, A-4	3-23	3-23	77-96 	77-96 	63-96
	1 7-8	Cobbly fine sandy loam	ML	٥	3-23	3-30	96-99	96-99	146-96
	8-16		CL, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	156-96	96-99	143-96
	16-24	loam, stony loam Fine sandv loam, silt	A-4 CL.GM.CL-ML A-6.	A-4 A-6, A-2-4,	3-23	1 3-30	 56-96	 56-96	I 143-96
		, stony loam	Ì		: - –	; - –	: -	<u> </u>	·
	24-29		CL, SM, SC-SM A-6,	A-6, A-2-4,	1 2-17	1 2-22	86-991	86-991	51-98
		fine sandy loam, silt loam		A-4					
	1 29-60	Silt loam, loam, sandy loam, very cobbly fine sandy loam	CL, SM, GC-GM A-6, A-2	A-6, A-4, A-2-4	2-17	1 2-22	 - - -	86-991	51–98
740974									
Oquaga	0-1	Slightly decomposed plant material	TA	A-8	o 	o 	100	100	100
	1-4	Channery loam	M, ML	A-7-5, A-4	0	4-18	178-96	96-771	166-89
	4-20	Fine sandy loam, very channery loam, silt	CI, GC-GM, GM	GM A-6, A-1-b, A-4 	o 	118-36	44-78 	143-77	33-77
	20-25	roam Fine sandy loam, sandy loam, extremely	CL, GP-GM, GC-GM	A-6, A-2-4, A-1-a	°	123-46	114-70	112-70	9-70
		channery loam, silt							
	1 25-80	Bedrock			¦ 		¦ 		
	_	_	_		_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

Map unit symbol	Depth	USDA texture	Classif	Classification	Fragments	lents	Pe	Percentage pas	ye pas
and soil name	· 				>10	3-10			
			Unified 	AASHTO	i 	i 	4	10	40
740975	In				Pct	Pct			
Arnot	0-1	Slightly decomposed plant material	LA _	A-8	0	0	100	100	100
	1-2	Loam	CL-ML, ML	A-4, A-6	0	0	100	100	83-90
	2 -3	Fine sandy loam	SC-SMI		. 0		100	100	80-93
	3-4	sandy	CF.		0	0	100	59-100 48-93	48-93
					_	_			
	4-12		CL, GP-GC, GC	GC A-1-a, A-6,	0	 o	14-100	14-100 11	111-93
	12-17	gravelly loam Silt loam extremely	ו עד עד עד דער דער דער דער דער דער דער דע	A-Z-4 A-Z-4 A-Z-05	 c		14-1001	14-100111-93	111-93
	, i	\neg	ò	A-1-a	- -	 >) 	-
	17-80	Bedrock	:		- -	 	!	-	
740987									
Scio	9-0	Silt loam	ML, CL	A-7-5, A-4	0	0	100	100	89-96
	6-13	Silt loam			0	0	100	100	89-96
	13-23	Very fine sandy loam,	MI, CL	A-6, A-4	0	0	100	100	82-10
		loam			_		_ ;	,	_ ;
	1 23-28	Very fine sandy loam, silt loam	ML, CL	A-6, A-4	0	 o	100	100	82-10
	1 28-50	Very fine sandy loam,	ML, CL	A-6, A-4	0	0	100	100	82-10
	_	loam			_	_	_		
	50-59 	Very fine sandy loam, silt loam	ML, CL	A-6, A-4	 o	 o	100	100	82-10
	59-72	Very fine sandy loam,	MI, CI	A-6, A-4	0	0	100	100	82-10
		silt loam 							
740988				_	-	-	_		
Udifluvents,									
occasionally flooded	0-3	Toamy wand	× ×	A-2-4	 c	 c	100	100	74-84
	3-16		-SM. SM	A-2-4	. 0	. 0	100	100	74-84
	16-22		-SM, SCI	SCIA-6, A-2-4,	0	0	100	100	170-86
	_				_	_	_		
	1 22-27	Sandy loam	SM, SC-SM, SC	SC A-6, A-2-4,	0	0	100	100	170-86
	27-32	Sandy loam	SM, SC-SM, SC	SCIA-6, A-2-4,	0	0	100	100	70-86
	_	_	_	A-4	_	_	_		
	32-60 	Stratified loamy sand to sandy loam	SC-SM, SM 	A-2-4	 o	 o	100	100	74–84
	_	_	_	_	_	_	_		

Table 14. -- Engineering Properties -- Continued

	!		Classi	Classification	Fragm	Fragments	Pé	Percentage pas	Je pas
Map unit symbol	Depth	USDA texture				,		sieve number	umber
and soll name			 Unified 	AASHTO		3-10 1 in	4	10	40
0000	In				Pct	Pct			
/40991 Unadilla	8-0	 Silt loam	MI, CL	A-4	- -	0	100	 95-100 84-96	84-96
_	8-14	Silt	MI, CI	A-4	0	0	100	191-100 74-10	74-10
_	14-25	Very fine sandy loam,	ME, CL	A-4	0	0	1000	191-100 74-10	74-10
	, L	loam, silt loam		_ :			-		7
	25-39	Very line sandy loam, loam, silt loam	ML, CL	A-4 	 -	 - 	001	91-100 74-10	74-10
	39-60	Fine sandy loam, loamy	SM, ML, CL	A-4	0	0	100	75-100 64-10	64-10
_		fine sand, v				_		_	
		fine sandy loam, silt							
		Loam							
740992									
Unadilla	0-8	_	MI, CL	A-4	- 0 -	0	100	195-100	84-96
_	8-14	Silt loam	ML, CL	A-4	- 0 -	- 0	100	91-100 74-10	74-10
_	14-25	Very fi	ML, CL	A-4	- 0 -	0	100	91-100 74-10	74-10
_		loam, silt loam		_	_	_	_	_	
_	25-39	2	ML, CL	A-4	- 0 -	- 0	100	91-100 74-10	74-10
_		loam		_	_	_	_	_	
_	39-60	sandy loam,	SM, ML, CL	A-4	- 0	- 0	100	175-100 64-10	64-10
		fine sand, v	_						
		fine sandy loam, silt							
_		- FOGUII							
740995						_		_	
Wellsboro,				_	_	_	_	_	
extremely stony	8-0	Silt loam		A-4	- 0	10-15	191-97	_	76-88
_	8-15	Loam, cobbly silt		A-4	0	2-26	15-93	75-93	60-87
_	15-24	Silt loam, cobbly loam	ICI, GC-GM,	A-4	- 0	3-30	71-91	71-91	58-88
_		_	CI-MI	_	_	_	_	_	
	24-29	Silt loam, cobbly loam	CL, GC-GM,	A-4	 0	3-30	63-91	63-91 	52-88
	000	11.0	CL-ML			000	000	- 00	71
_	78187	Loam, Silt loam, Cobbig sandv loam	CL, SC-SM	A-4, A-1-D, A-2-4	- -	0 7 10	061501	061501	4T -00
- -	37-60	Loam, silt loam, cobbly	CI, SC-SM	A-4, A-1-b,	0	5-28	163-98	86-89	41-86
_		- 24	_	A-2-4	_	_	_	_	
_			_	_	_	_	_	_	

Table 14. -- Engineering Properties -- Continued

	1		Classi	Classification	Fragn	Fragments	ď	Percentage	ge pas
and soil name	nep cr	בפארמדפס			>10	3-10		ש א ה ה	steve ilminer
			Unified	AASHTO	ni -	ni n	4	10	1 40
	In				Pot	Pct			
740996 Wellsboro,									
extremely stony	0-8	Silt loam	ML, CL	A-4	0	110-15	191-97	191-97	176-88
	8-15	Loam, cobbly silt loam	CL-ML, CL	A-4	0	1 2-26	175-93	175-93	160-87
	15-24	Silt loam, cobbly loam	CL, GC-GM, CL-ML	A-4	 0	3-30	71-91 	71-91 	58–88
	24-29	Silt loam, cobbly loam	CI, GC-GM,	A-4	0	3-30	163-91	63-91	152-88
	29-37	 Loam, silt loam, cobbly	CL-ML	 A-4, A-1-b,	 0	5-28	 63-98	163-98	 41-86
		loam			_		_		_
_	37-60	Loam, silt loam, cobbly	ICL, SC-SM	A-4, A-1-b,	_ _	5-28	163-98	163-98	141-86
		sandy loam		A-2-4					_
741149									
Lackawanna,		_	_		_		_	_	_
extremely stony	0-2	Slightly decomposed	PT	A-8	0	0	100	100	1 100
	0-0	plant material	- N	N - K - V - C - K		1 2 - 2 2	 FO_100	 	140-10
	יו ו ו	rine sandy	1	A-Z-4, A-4	200	113-23	139-100	1391100	140 I TO
	3-7	Cobbly fine sandy loam 	CL, SM, CL-ML 	CL-ML A-6, A-2-4, A-4	3-23	3-23	77-96 	177-96	63–96
_	7-8	Cobbly fine sandy loam	GM, ML	A-1-b, A-4	3-23	3-30	156-96	156-96	146-96
_	8-16	Fine sandy loam, silt	CL, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	156-96	96-991	143-96
_		loam, stony loam	_		_		_	_	_
_	16-24	Fine sandy loam, silt	CL, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	156-96	156-96	143-96
_		stony loam			_	_	_	_	_
_	24-29	sandy loam,	CL, SM, SC-SM A-6,	A-6, A-2-4,	2-17	2-22	86-991	166-98	51–98
		fine sandy loam, silt		A-4					
	20-60	+Cam	W INDED	V - & - & -	2-17	2-22	80-99	80-991	151-09
	3	loam, very cobbly fine	į	A-2-4	, ,	1	2 _	2 -	- -
_		loam			_				
_		_	_		_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

Men tirrit weW	4	Carried Adolf	Classif	Classification	Frag	Fragments	– –	Percentage pas	ge pas
and soil name	nebcu				>10	1 3-10	_,_	steve.	numper
			Unified 	AASHTO	ni n	 ni	4	10	40
741150	In				Pct	Pct			
Lackawanna, extremely stony	0-2	 Slightly decomposed	 PT	A-8	0	°	100	100	1 100
	2	plant material	MT.	A-2-4 A-4	5-23	113-23	159-1001	59-100	 48-10
	3-7	fine sandy	SM, CL-ML	<u> </u>	3-23	3-23	96-14	96-77	163-96
	7-8	 Cobbly fine sandy loam	GM, ML	A-1-b, A-4	3-23	3-30	156-96	96-96	 46-96
_	8-16	Fine sandy loam, silt	CL, GM, CL-ML A-6,	A-6, A-2-4,	3-23	3-30	96-99	96-99	143-96
_		ı, stony loam	į		-		_ :		_ ;
	16-24	Fine sandy loam, silt loam story loam	CL, GM, CL-ML A-6, 	A-6, A-2-4,	3-23	3-30	96-96	96-96	43-96
	24-29	stony sandy 1	CL, SM, SC-SM A-6,	A-6, A-2-4,	2-17	1 2-22	86-991	86-991	 51–98
		fine sandy loam, silt		A-4					
	29-60	roam Silt loam loam sandv	CT. SM. GC-GMIA-6	A-6. A-4.	2-17	2-22	86-99	166-98	151-98
		cobbl	Ì		i i	 -			
801114									
Oquaga	0-1	Slightly decomposed	PT	A-8	0	o 	100	100	100
_	1-4	France macerial	SC-SM, ML	A-7-5, A-4	0	4-18	178-96	96-11	66–89
_	4-20	.()	_ ₽	GM A-6, A-1-b,	0	118-36	144-78	143-77	133-77
		channery loam, silt		A-4					
_	20-25	Fine sandy loam, sandy	CL, GP-GM,	A-6, A-2-4,	0	123-46	114-70	112-70	1 9-70
_		, extremely	I GC-GM	A-1-a		_	_	_	_
		channery loam, silt loam							
	25-80	Bedrock	¦			 			
810906									
Oquaga	0-1	Slightly decomposed plant material	LA -	A-8	0	。 	100	100	100
_	1-4	Channery loam	M, ML	A-7-5, A-4	0	4-18	96-84	96-77	166-89
	4-20	Fine sandy loam, very channery loam, silt	CL, GC-GM, GM 	GM A-6, A-1-b, A-4	0	118-36	144-78	143-77	33-77
_				_				_	_
	20-25	Fine sandy loam, sandy	CL, GP-GM,	A-6, A-2-4, A-1-a	0	123-46	114-70	112-70	9-70
		, a		- ·					
	25-80	loam Bedrock				 	- - 	 	
_		_	_	_	_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Classif	Classification	Fragn	Fragments	- Pe	Percentage	le pas
Map unit symbol	Depth	USDA texture			710	3-10	-	sieve r	number
			Unified	AASHTO	di H	ri ui	4	10	40
1147465	In				Pct	Pct			
Alden, extremely stony 	0-2	 Slightly decomposed nlant material	- - -	A-8	0	0	100	100	100
	2-7	_ meo[^	OH, MI.	A-7-5, A-6	00	00	100	100 75-100 69-95	69-95
		loam, very fine	!		,	·			1
- 	14-28	sandy loam Very fine sandy loam, silt loam, silty clay	CL, ML	A-4, A-7-6	0	0	180-1001	80-100	69-10
	28-43		SM, CL	A-6, A-7-6, A-4	0	0	179-100	79-100	61-10
	43-60	clay loam Silty clay loam, fine sandy loam, silt loam, loam	GC-GM, CL	A-2-4, A-7-6, A-6	o	0		56-93	45-93
1147467 Arnot, very									
rocky	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100
_	1-2		ML, ML		0	0	1000	100	83-90
- 	3-4	Fine sandy loam Fine sandy loam	SM, CL, SC-SM A-4, SM, CL, SC-SM A-4,	A-4, A-6 A-4, A-1-b,	 o o	o o	100	100 59-100	80-93 48-93
	4-12			A-6 A-1-a A-6		c	114-1001	 	11-93
- -					,	, - –		-	1
	12-17	Silt loam, extremely gravelly loam	CL, GC, GP-GC	GP-GC A-1-a, A-6, A-2-4	 o	o 	14-100 	14-100 14-100 	11-93
	17-80	Bedrock							
Lordstown, very	0	- Lascomocad v[+dp:l8]	- - -	α 1	·	c	0	9	100
	l (plant material	Č	ш					
	2-3	Fine sandy loam	SM, CL, SC-SMIA-4,	A-1-3, A-4 A-4, A-6	00	0	1000	100 88-93	80-93
	3-5	loam,	GM, CL	<u>_</u>	0	0	147-100	0	38-93
	5-17	 Silt loam, gravelly loam CL, 	GW, GC	A-6 A-6, A-1-a, a-4	0	0	4-100	4-100	3-93
	17-22	Silt loam, gravelly loam CL,	GW, GC	A-1-a, A-6,	0	0	4-100	4-100	3-93
	22-36	, loam	A-4 GW, CL, GC-GM A-6,		0	0	4-100	4-100	3-98
		gravelly fine sandy loam		A-1-a					
	36-80	Bedrock							 - -
-		-	-				-		

Table 14. -- Engineering Properties -- Continued

- tivii veM	4	Contract & COT	Classif	Classification	Frag	Fragments	<u>~</u>	Percentage pas	age pas
and soil name	ווים הים ו				>10	3-10		ש ע ע	ı mımer
_ _			Unified	AASHTO	i ni	ni n	4	10	40
1147468	In				Pct	Pct			
Arnot	0-1	Slightly decomposed	PT	A-8	o - - -	0	100	100	100
	1-2	Loam	CL-ML, ML	A-4, A-6	0	0	100	100	83-90
_	1 2-3	Fine sandy loam	, SC-SM		0	- 0	100	100	
	3-4	Fine sandy loam	SM, CL, SC-SM A-4,	A-4, A-1-b,	0	0	100	159-100	148-93
	4-12	 Silt loam, very	CL, GP-GC, GC	A-6 GC A-1-a, A-6,	0	 0	114-100	4-100 14-100 11-93	 11-93
_	_	gravelly loam	_	A-2-4	_	_	_	_	
_	12-17		CL, GC, GP-GC A-6,	A-6, A-2-4,	0	- 0 -	114-100	4-100 14-100	111-93
_ -	17-80	gravelly loam		A-1-a 	; 	- 	- - -	 ¦	
	20 1	400							
Lordstown	0-1	Slightly decomposed	PT	A-8	o - - -	0	100	100	100
	1-2	Loam	CI, SC-SM, ML	A-7-5, A-4	0	0	100	82-100	168-90
	2-3	Fine sandv loam	CI, SC	A-4, A-	0	0	100		80-93
	3-5	loam,	GM, CL	A-2-4, A-4,	0	0	47-100	0	38-93
					_	_	_	_	_
	5-17	Silt loam, gravelly loam CL,	GW, GC	A-6, A-1-a, a-4	o 	 o	4-100	4-100	3-93
	17-22	Silt loam, gravelly loam CL,	CI, GW, GC	A-1-a, A-6,	0	0	4-100	4-100	3-93
_	96-66		A-4					7	00
	26-25		È	נו ו	- 	- 	00 H	r - –	000
	_		_		_	_	_	_	_
	36-80	Bedrock	-	:	<u> </u> 	<u> </u>	<u> </u>	 	
1147469			_						
Arnot	0-1	Slightly decomposed	PT	A-8	0	0	100	100	100
	1-0	prant material	TW TW TO	3 - K					00-00
	7 1 0	- Formal Control Contr	שב						
	3-4	sandy) H			0	100	159-100	48-93
	· ·	7	Ì		, - –	· _	· -	2 -)
	4-12		CL, GP-GC, GC	GC A-1-a, A-6,	0	0	114-100	114-100	111-93
_	7	gravelly loam		A-2-4		_ <			77
	71-71	\neg	CL, GC, GF-GC A-0,		- 	- - 	00 T L # T —		C6 - TT
_	17-80		<u>-</u>		<u> </u>	-	:		-
_	_	_	_	_	_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragm	Fragments	l Pe	Percentage pas	ye pas
Map unit symbol	Depth	USDA texture						sieve number	number
and soll name			Unified	AASHTO	- ui	3-10 ni	4	10	1 40
1147469	In				Pct	Pct			
Lordstown	0-1	Slightly decomposed	PT	A-8	0	0	100	100	100
	1-2	Loam	CI, SC-SM, MI	MLIA-7-5, A-4	0	0	100	82-100	168-90
	2-3	Fine sandy loam	CI, SC-	A	0	0	100	100 100 80-93	80-93
_	3-5		GC-GM, CL	A-2-4, A-4,	0	0	47-100	47-100	138-93
	5-17	 Silt loam, gravelly loam CL,	CI, GW, GC	A-6 A-6, A-1-a,	0	0	4-100	4-100	3-93
	17-22	 Silt loam, gravelly loam CL,	CI, GW, GC	A-4 A-1-a, A-6,	0	0	4-100	4-100	3-93
	95-00		A-4				7-1	1100	3-00
	000	relly f	Ì	t d	 >	·)) - -
	36-80	Bedrock							-
1147470									
Atherton, very							_		
poorly drained-	0-2	Slightly decomposed	PT	A-8	0	0	100	100	100
	2-4	plant material Moderately decomposed	ΕΔ	α-	 c	c	100	100	100
		plant material	4	·	· -	· 	2	9	9
	4-8	Mucky silt loam	НО	A-7-5	0	0	100	75-100	96-04
_	8-10		MH, SM, CL	IA-7-5, A-6,	- 0	0	1000	176-100 61-10	61-10
_		loam, silt		A-4	_	_	_		_
		loam, very fine sandy							_
	10-18	Loam Toam silt loam fine	SM	 A-7-6 A-6	 c	c	100	 78-100 <i>6</i> 2-10	62-10
	9	. loam, sil			 -	· - –) 1	9	1
		very f							
	18-29	Loam Loam, silt loam, fine	SM. CL	A-7-6. A-6.	0	0	100	178-1001	62-10
_		y loam, silt							
_		loam, very fine sandy			_	_	_		_
	000	100	5	, r	_ <	-		700	7
	28-82	SILU LO	SM, CL	A-/-0, A-0,	 -	>	001	001-0/	0
		Samuy roam, Sirry Ciay loam, very fine sandy		ř.					
_		loam		_	_	_	_		_
	32-41	ilt lo	SM, CL	A-7-6, A-6,	0	o 	100	178-100 62-10	62-10
		sandy loam, silty clay loam, verv fine sandv		A-4					
) F-)			_				
	41-45	fine sandy	CL, SM, SC-SM		 0	o 	100	75-100 56-10	56-10
		very iine sandy loam, silt loam, silty clav		A-Z-4, A-4					
_		ì			_	_	_		

Table 14. -- Engineering Properties -- Continued

	:		Classif	Classification	Fragments	ents	Pe	Percentage pas	e pas
Map unit symbol and soil name	Depth	USDA texture 			>10	3-10		sieve number	umber
			Unified	AASHTO	i ni	i ni	4	10	40
1147470	In				Pot	Pot			0
Atherton, very poorly drained-	45-50	Fine sandy loam, loam, very fine sandy loam, silt loam, silty clay	SM, CL	A-7-6, A-6, A-4	0	0	100	75-100 56-10	56-10
	50-60	Loam, very fine sandy loam, fine sandy loam, silt loam, silty clay	CL, SM, SC-SM	SC-SM A-7-6, A-2-4, A-4	0	0	100	75-100 56-10	56-10
	02-09	Loam, fine sandy loam, very fine sandy loam, silt loam, silty clay	CI, SM, SC-SM	SC-SM[A-7-6, A-2-4, A-4	0	0	100	75-100	56-10
Atherton, poorly drained-	0-6		ţ	A-6, A-7-5	00	00	100	73-100	168-98
	9-17	Loam, Silty Clay Loam, fine sandy loam, silt loam, very fine sandy loam		A-6, A-/-6, A-4	- -	- -	0		01-19
	12-30	Fine sandy loam, loam, very fine sandy loam, silt loam, silty clay	SC-SM, CL	A-6, A-7-6, A-4	0	0	100	75-100	61-10
	30-40	andy loam, clay loam, silty clay	SC-SM, CL	A-7-6, A-2-4, A-6	0	0	100	77-100 62-10	62-10
	40-60	Very line sandy loam, Fine sandy loam, sandy clay loam, silt loam, silty clay loam, very fine sandy loam	SC-SM, CL	A-7-6, A-2-4, A-6	0	0	100	77-100	62-10
1147471 Catden	0-2 2-13 13-20 20-32 32-60	Mucky peat Muck Woody muck Muck	PT PT PT PT	8 - 본 - 본 - 본 - 본 - 본 - 본 - 본 - 본 - 본 - E - E - E - E - E - E - E - E - E - E	00000	00000	100 100 100 100	1000	100 100 100 100

Table 14. -- Engineering Properties -- Continued

:	:		Classi	Classification	Fragments	nents	Pe		ye pas
Map unit symbol and soil name	Depth	USDA texture 			>10	3-10		sieve r	number
			Unified	AASHTO	- u	in	4.	10	40
47474	In				Pct	Pct			
L14/4/4 Chippewa,									
extremely stony	0-2	Slightly decomposed	PT	A-8	0	0	1000	100	100
_	2-4	Silt loam	CI	A-6	0	0	1000	100	91-10
_	4-8	Silty clay loam, loam,	CI	A-7-6, A-6	0	0	196-1001	O	
	,	loam	_ ;			ď	- 5	- 6	1
	8-13	Silty clay loam, clay	10 -	A-7-6, A-6	 o	0	92-100 -	92-100	9-67
- -	13-21	silty clay]	CI, CL-ML	A-4, A-7-6,	- - 0	0	193-1001	93-100 93-100 75-10	75-10
		fine sandy loam, silt		A-6					
-	21_28	ביים'.	TMT TO 12	3-7-4 1-41		c	193-1001	-100193-100175	75-10
	67 - 17	loam, silt		A-6	- -	•	1	200	9
		sandy loam		_ :	_	•	_ :	_ ;	_ ;
_	29-34	silty clay l	GC-GM, CL		0	0	46-100	6-100 46-100 37	37-10
		fine sandy loam, silt		A-7-6, A-6					
-	34-60	Silty	CI. SM. SC-SM	SC-SMIA-1-a	 0	0	100	40-1001	30-10
)	10-0 Form	-		,)))))
1147475									
Colonie	0-0	 Toamy fine sand	W.S.	A-4		c	195-1001	90-100188-10	88-10
	2-11	fine	NS.	A-4		0	195-1001	90-100	88-10
	11 - 24	fine	SM, SP-SM	IA-2-4, A-3	0	0	196-100191-100171-10	91-100	71-10
_					- -		_		
_	24-40	Loamy fine sand, fine	SM, SP-SM	A-2-4, A-3	0	0	196-100191	91-100 71	171-10
_	;	y loam, fine				,			_ ;
	40-62	and, f	SM, SP-SM	A-2-4, A-3	- · •	0	1001-961	17 001-16	171-10
_		sandy Loam, fine sand 							
1147478		. –						_	
Delaware,		_	_	_	_		_	_	
rarely flooded-	0-1	Slightly decomposed	I-D-T	A-8	- · •	0	1000	100	100
	7-1	ot mate				c	1001	100	00-1
	1 T	Fine sandy roam	CL-ML, SM	W-Z-4	 	o c	193-1001	90-1-00	
_	11-20	Fine sandy	¥ 2 0 1	٤_	 > c	· c	195-1001		י ל ב דורמ
_	20-33	Fine sandy	II. SM.		0	0	196-1001		81-10
	33-41	Trine sandy	. W	1 4-2-4 A-4		· c	195-1001	95-100190-100179-10	79-10
	41-56	sand,	SM, CL			0	195-1001	95-100 90-100 77-10	77-10
_		/ loam		_	_		_		
	26-60	Loamy sand, fine sandy	SM, CL, CL-ML A-4	A-4	 0	0	195-1001	-1001-100179	179-10
		Loam, Loam							
-		_	_	_	_		-		

Table 14. -- Engineering Properties -- Continued

			Class	Classification	Frag	Fragments	Ā	Percentage pas	re pas
Map unit symbol	Depth	USDA texture	_		_			sieve number	number
and soil name	· _	_			710	1 3-10	_		
			Unified	AASHTO	ni -		4	10	40
	In				Pct	Pct			
1147482 Fredon, verv									
stony	1 0-1	Slightly decomposed	PT	A-8	0	0	100	100	100
	_	plant material		_	_	_	_	_	_
	1-8	loam		A-4	0	0	185-100	85-100 75-96	175-96
	8-14	andy loam, v	CL, ML	A-4	0	0	100	186-100	68-10
	_	fine sandy loam, silt	_	_	_	_	_	_	_
	_	loam, loam		_	_	_	_	_	_
	14-18	sandy loam, v	SM, CL	A-4	0	o _	186-100	86-100 86-100 64-10	64 -10
		fine sandy loam, loam,	_						
	_	silt loam		_	_	_	_	_	
	18-23	Fine sandy loam, very	SM, CL	A-4	0	o _	186-100	86-100 64-10	64 -10
	_	fine sandy loam, loam,	_	_	_	_	_	_	_
	_	silt loam	_	_	_	_	_	_	_
	1 23-31	Loamy fine sand, loamy	SP, SP-SM	A-1-b, A-1-a	0	o _	177-87	121-49	110-34
	_	sand, sand, extremely	_	_	_	_	_	_	_
	_	gravelly loamy coarse	_	_	_	_	_	_	_
	_	sand, coarse sand	_	_	_	_	_	_	_
	31-36	Loamy fine sand, loamy	SP-SM, SP	A-1-a	0	0	178-87	121-49	1 8-30
	_				_	_	_	_	_
	_	gravelly coarse sand,	_	_	_	_	_	_	_
	_	loamy coarse sand	_	_	_	_	_	_	_
	36-45	Loamy fine sand, loamy	ISP, SP-SM, S	SW A-1-a	0	0	168-87	114-49	1 5-30
	_	sand, sand, very	_	_	_	_	_	_	_
	_	gravelly coarse sand,	_	_	_	_	_	_	_
	_	loamy coarse sand	_	_	_	_	_	_	_
	45-55	Loamy fine sand, loamy	ISP, SP-SM, S	SW A-1-a	0	o _	165-87	114-49	1 5-30
	_	sand, sand, extremely	_	_	_	_	_	_	_
	_	gravelly coarse sand,	_	_	_	_	_	_	_
	_	loamy coarse sand	_	_	_	_	_	_	_
	1 55-60	Loamy fine sand, loamy	ISP, SP-SM, S	SW A-1-a	0	°	178-88	121-49	1 8-30
	_	sand, sand, very	_	_	_	_	_	_	_
	_	gravelly coarse sand,	_	_	_	_	_	_	_
	_	loamy coarse sand	_	_	_	_	_	_	_
	_		_		_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragments	ents	Pe	Percentage pas	ge pas
Map unit symbol	Depth	USDA texture						sieve number	number
and soil name	_		_	_	×10	3-10			
			Unified 	AASHTO	i n	in	- -	10	40
1147482	In				Pot	Pct			
Halsey, very		_			-				
stony	0-1	Slightly decomposed	PT 	A-8	0	0	1 100	100	100
-	ا ا ا	Cilt los	IMT.	N-4		c	100	192-100182-96	82-96
_	5-11			A-4	. 0	0	100	192-100	182-96
_	11-20	Loam, very fine sandy		A-4	0	0	100	186-100 68-10	168-10
_	_	silt	_	_	_		_	_	_
_	_	loam	_		_		_		_
	20-25	Sand, loamy fine sand,	SP-SM, SM	A-1-b, A-2-4	0	0	100	154-92	32-76
		sand, loamy							
	25-25	sand, loamy coarse sand	OM OF			c	166-05	105.70	10.10
-	n n	LOGINY		¥-1		>	001001	0/=67	1011
_	_	, loamy sa	_	_	_		_	_	_
	35-49	Sand, loamy fine sand,	SP-SM, SW	A-1-b, A-1-a	0	0	02-091	125-60	110-37
_	_	loamy coarse sand,	_	_	_		_	_	_
	_	gravell							
_	49-56	sand, Loamy sand Sand loamy fine sand	- STEEN SW. ST			c	160-66	125-60	 10-37
-	1	7 a c c		1	,	•	2 -)) }
_		coarse nely gra							
	_						_	_	
	09-95		SP-SM, GP	A-1-b, A-1-a	0	0	143-66	125-60	110-37
-	_		_	_	_		_	_	_
	_								
		coarse sand, loamy sand 							
	_								
nazen, very			- E	α		c	7		7
	H >		14 _	 4 _		•) - -	2	2
_	1-10	Loam	MI, SC-SM, CL	CL A-6, A-4	0	0	186-1001	186-100	171-90
_	10-18	Sandy loam, coarse	SC-SM,	SM A-4, A-1-b,	0	0	172-1001	172-100 50-79	150-79
	_	loam			_		_	_	_
_	18-29	Sand, loamy sand, very	ISC-SM, GP, SM	SM A-2-4,	0-61	0-51	114-92	114-92	6-64
		stony loamy coarse		A-1-a, A-1-b 					
-	29-41	loamy sa	SP-SC. GP. SP	SPIA-1-b. A-1-a	0-61	0-51	137-79	2-66	1 2-40
- -	:	elly coarse s	j	1	5	1	<u>.</u>) - –	
		coars			- ;		_ ;	_ ;	_ ;
•	41-60		SP-SC, GP	A-1-b, A-1-a	0-61	0-51	137-79	99-5	2-40
		ely gra							
		coarse sand, roamy							
			_					_	
		-			•				

Table 14. -- Engineering Properties -- Continued

Men tinit cem	- - - - - - - - - -		Classi	Classification	Fragi	Fragments	 A	Percentage pas	ge pas
and soil name	1 Dept.	רמיים מסכים –			>10	3-10		מאס דמ	T COUNTY
			Unified	AASHTO	in	ni n	4	10	40
	In				Pct	Pct			
1147485	_	_	_	_		_	_	_	_
Hoosic, very			F		d				-
stony	T - 0	Siigntiy decomposed plant material	구	- 	>	o 	001	00 T	001
	1-9	Gravelly loam 	ML, GC, GC-GM A-6, A-4	[A-6, A-4,	0	0	157-97	145-97	37-87
	0-21	Topm candy loam trans	אני פני פני		c	0-01	38-85	7-85	1 4-61
	17_6 .	Lucami, samuy roami, very	150' de' de	B-T-W '0-W	>	17-0	0000	0	TO
		gravelly coarse sandy loam							
	1 21-27	Sand, coarse sand,	SC-SM, GP,	A-2-4,	0	0-51	141-85	82-9	3-54
	_	extremely gravelly	GP-GM	A-1-b, A-1-a		_	_	_	_
	_	loamy coarse sand,	_	_		_	_	_	_
	_	loamy sand	_	_		_	_	_	_
	1 27-37	Loamy sand, sand,	SC-SM, GP	A-1-b, A-1-a	0 - 14	0-51	137-85	82-9	1 2-48
	_	extremely gravelly	_	_		_	_	_	_
	_	coarse sand, loamy	_	_		_	_	_	_
	_	coarse sand	_	_		_	_	_	_
	37-49	Loamy sand, sand,	ISC-SM, GP, SE	SC-SM, GP, SP A-1-b, A-1-a	0	0-51	41-85	8L-9	1 2-48
	_	extremely gravelly	_	_		_	_	_	_
	_	coarse sand, loamy	_	_		_	_	_	_
	_	coarse sand	_	_		_	_	_	_
	49-60	Loamy sand, sand,	IGP, SC-SM, SW	GP, SC-SM, SW A-1-b, A-1-a	0-14	0-51	41-85	82-9	1 2-48
	_	extremely gravelly	_	_		_	_	_	_
	_	coarse sand, loamy	_	_		_	_	_	_
	_	coarse sand	_	_		_	_	_	_
	_	_	_	_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

- today	1 4		Classi	Classification	Fragments	nents	Pe	Percentage pas	ye pas
and soil name	T Delivery	- COSTS COST			>10	3-10		של אלי	
			Unified	AASHTO	i 	in	4	10	40
1147490	In				Pct	Pct			
Hoosic, very			!	:					,
stony	I - 0	SlightLy decomposed plant material	TA _	8- 4 -	- -	5	001 -	001	00T
	1-9	Gravelly loam	MI, GC, GC-G	GC-GM A-6, A-4,	0	0	157-97	45-97	37-87
- 	9-21	 Loam, sandy loam, very	 SC, GP, GM	A-2-4 A-6, A-1-a		0-21	 38-85	7-85	4-61
		gravelly coarse sandy							
_	21-27	Sand, coarse sand,	SC-SM, GP,	A-2-4,	0	0-51	41-85	6-78	3-54
		emely gra		A-1-b, A-1-a	_			_	
		loamy coarse sand, loamy sand							
	27-37		SC-SM, GP	A-1-b, A-1-a	0-14	0-51	37-85	6-78	2-48
		extremely gravelly							
- -		sand,			_				
_	37-49	Loamy sand,	ISC-SM, GP, SE	SP A-1-b, A-1-a	0	0-51	41-85	6-78	2-48
_	_	emely gra		_	_		_	_	
	70-60	n	רים אים בים מים אים בים	 	- 1	7	11-05	01-9	0 7 0
-	001	Loamy Said, Said, extremely gravelly	SC SE	W-I-W' W-I-W	# H I D	100		0/10	0 # 1 V
	_	san							
		coarse sand 							
Hazen, very					_			_	
stony	0-1	Slightly decomposed nlant material	PT -	A-8	 o	0	100	100	100
_	1-10	Loam	MI, SC-SM, CI	CL A-6, A-4	0	0	86-100	86-100	71-90
_	10-18	Sandy loam, coarse	SC-SM,	SM A-4, A-1-b,	0	0	172-1001	72-100 72-100 50-79	50-79
_		/ loam		A-2-4	_		_		
-	18-29	Sand, loamy sand, very	ISC-SM, GP, SN		0-61	0-21	114-92	14-92	6-64
-		stony loamy coarse sand, coarse sand		A-1-a, A-1-b 					
	29-41	Sand, loamy sand, very	SP-SC, GP, SI	SP A-1-b, A-1-a	0-61	0-51	137-79	5-66	2-40
		gravelly coarse sand, loamy coarse sand							
	41-60	Sand, loamy sand,	SP-SC, GP	A-1-b, A-1-a	0-61	0-51	137-79	5-66	2-40
	_	coarse sand	_	_	_		_	_	
_	_	_	_	_	_		_	_	

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	Fragi	Fragments	A.	Percentage pas	ye pas
Map unit symbol and soil name	Depth 	USDA texture 			>10	3-10		sieve number	number
			Unified	AASHTO	in	ri ui	4	10	1 40
	In				Pct	Pct			
stony	0-1	 Slightly decomposed plant material	_ PT _	A-8	0	0	100	100	100
	1-9	Gravelly loam	ML, GC, GC-GM A-6, A-4	[A-6, A-4,]	0	0	157-97	145-97	37-87
	9-21	Loam, sandy loam, very	SC, GP, GM	A-6, A-1-a	0	0-21	138-85	1 7-85	4-61
		gravelly coarse sandy loam							
	1 21-27	Sand, coarse sand,	SC-SM, GP,	IA-2-4,	0	0-51	141-85	82-9	3-54
	_	extremely gravelly	GP-GM	A-1-b, A-1-a		_	_	_	_
		loamy coarse sand,							
	1	Direct Francisco	1000		7	7	0	1	,
	27-37	Loamy sand, sand, extremely gravelly	SC-SM, GP 	A-1-b, A-1-a 	0-14	1 0-21	137-85	8/9	2-48
		coarse sand, loamy							
	37-49	Loamy sand, sand,	SC-SM, GP, SI	SC-SM, GP, SP A-1-b, A-1-a	0	0-51	41-85	84-9	2-48
	_	extremely gravelly	_	_		_	_	_	_
	_	coarse sand, loamy	_	_		_	_	_	_
	_	coarse sand	_	_		_	_	_	_
	49-60	Loamy sand,	IGP, SC-SM, SV	GP, SC-SM, SW A-1-b, A-1-a	0-14	0-51	41-85	82-9	1 2-48
	_	extremely gravelly	_	_		_	_	_	_
	_	coarse sand, loamy	_	_		_	_	_	_
	_	coarse sand	_	_		_	_	_	_
	_	_	_	_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Ü	lassif	Classification	Fragments	ents	- Pe	Percentage pas	ge pas
Map unit symbol and soil name	Depth	USDA texture		-		>10	3-10		sieve number	number
			Unified	eq -	AASHTO	i ni	in	4	10	1 40
1147491	In			:		Pot	Pct			
Otisville, very stony	0-1	 Slightly decomposed	PT	_ =	A-8	0	0	100	100	1 100
	,	plant material	į			. – .	(:		
	1 - Z	Gravelly sandy loam	SC-SM, SM		A-2-4, A-1-b	 - c	1 C	164-92	151-84	37-66
	,	e sand, ver	SW-SM					2 -	20 H	
		gravelly loamy sand,								
- -	7-11	Sand, loamy fine sand,	SM, SP,	SP-SM A-1-b,	A-1-b,	0	7-0	153-85	118-78	9-54
		coarse sand, very		_	A-2-4, A-1-a	_		_	_	_
	11-19	sand, loamy sand, Sand, loamy fine sand,	SM, SP,	 SW-SM A-2-4,	A-2-4, A-1-a	0	0-14	 51-93	7-78	 3-54
		se sand, ve								
		gravelly loamy coarse								
-	19-31	Sand, Loamy Sand	Z W		- 4-1-4 - 4-1-4		0-0	151-03	7-78	3-48
	10-61	sand, elly co		<u> </u>	1		0 0	C6-TC	0/1/	0 1 1 1
_	_	loamy coarse sand, sand		_	_	_		_	_	_
_	31-43	Sand, loamy sand,	SM, SP,	SW	A-1-b, A-1-a	0	0-22	51-93	1 7-78	3-48
		w								
	43-60	coarse sand Sand loamy sand loamy	MS.		A-3 A-2-4	 c	c	100	192-1001	148-74
_	2	se sand		<u> </u>	A-1-b	- -	•	2	7 -	
_		stratified sand to		_	_	_		_	_	_
		, coar								
1147492										
Lackawanna,	_	_		_	_	_		_	_	_
extremely stony	0-2	Slightly decomposed	PŢ		A-8	0	0	100	100	100
	, ,	riai			N - K N - C - K	- 22	1 2 . 2 2	1001	 F0_100 40_10	10-10
	3-7	Cobbly fine sandy loam	CI, SM, C	A-2- CI-MI A-6,	A-6, A-4, I	3-23	3-23	177-96		163-96 163-96
		•		_		_		_		
_	1-8	y fine sandy	ML	_	þ,	3-23	3-30	96-99	96-99	146-96
	8-16	Fine sandy loam, silt	CI, GM,	CL-ML A-6,	A-6, A-2-4,	3-23	3-30	96-95	96-95	143-96
	16-24	loam, stony loam	No.	A-4		3-23	3-30	 E6_06	90-95	13-06
_	#7 - 0 T	silt loam	Ę		ζ.	2 -	0	961961	06.00.	06.0#.
_	24-29	andy	CL, SM,	SC-SM A-6,	A-6, A-2-4,	2-17	2-22	86-991	86-991	51-98
		sandy		_	A-4	_				_
	0		2			7	c	- 00	- 00	
	09-67	Silt loam, loam, sandy loam, very cobbly fine	CL, SM,	GC-GM A-0,	A-0, A-2-4, A-4	/T-7	77-7	00-00-	00-00	JI
		sandy loam								
-		_		_	_	_		_	_	_

Table 14. -- Engineering Properties -- Continued

			Classification	cation	Fragi	Fragments	Pe	Percentage pas	ge pas
Map unit symbol	Depth	USDA texture					_	sieve number	number
and soil name					>10	3-10			,
			Unitied	AASHTO			4	01 	- 4
1147500	In				Pct	Pct			
Wurtsboro, extremely stony	0-2	 Slightly decomposed		A-8	0	0	100	100	100
. —	_	plant material	_				_	_	
_	1 2-3		SM, M		0	0	187-100	87-100 74-100 61-90	61–90
	3-5	Fine sandy loam, loam	CI, SM, SC-SM A-6,	1-6, A-2-4,	o 	o 	187-100	87-100 73-100 57-95	57–95
	5-6	 Loam, fine sandv loam	A-4 CL, SM, SC-SM A-6,	A-4 A-6, A-2-4,	o 	0	173-100	 73-100 73-100 57-95	 57–95
_	· ·		 		· - —	· - —	! _		
	6-18	Sandy loam, loam, fine	CL, GM, SC-SM A-6,	A-6, A-1-b,	0	0	150-100	50-100 50-100 33-87	133-87
_	_	sandy loam	-	A-2-4	_	_	_	_	_
	18-24	ly sar	-GM, 12	A-6, A-1-a,	0	0	119-100	19-100 19-100 12-87	112-87
	_	loam, fine sandy loam	-SM		_	_	_	_	_
	1 24-30		-GM, P	A-6, A-1-a,	0	0	124-75	124-75	116-65
_	_	loam, fine sandy loam	_		_	_	_	_	_
	1 30-60	Ly sar	_	A-6, A-2-4,	0	0	133-87	133-87	122-75
	_	loam, fine sandy loam	GP-GM, SC	A-1-a	_	_	_	_	_
11/7501									
Wirtshoro									
extremely stony	0-2	 Slightly decomposed	I PT	8-8	0	0	100	100	100
7		plant material	_	,	· - —	· - —	: -	: _	-
	1 2-3	Fine sandy loam	ML, SM, SC-SM A-2-4,	A-2-4, A-4	0	0	187-100	87-100 74-100 59-93	59–93
	3-4	Fine sandy loam, loam	ICL, SM, SC-SMIA-6,	A-6, A-2-4,	0	0	187-100	87-100 73-100	l 57–95
	_		_		_	_	_	_	_
	9-4-	Loam, fine sandy loam	CL, SM, SC-SM A-6,	A-6, A-2-4,	0	0	173-100	73-100 73-100 57-95	57–95
_	_		_		_	_	_	_	_
_	6-18	Sandy loam, loam, fine	SC-SM, GM, CL A-6,	A-6, A-1-b,	0	0	150-100	50-100 50-100 33-87	133-87
	_	sandy loam	_	A-2-4	_	_	_		_
	18-24		-GM, 12	A-6, A-1-a,	0	0	119-100	19-100 12-87	112-87
_	_	loam, fine sandy loam	-SM		_	_	_	_	_
_	24-33	ly sar	-GM, 2	A-6, A-1-a,	0	0	124-75	124-75	116-65
_	_	loam, fine sandy loam	-SM		_	_	_	_	_
	33-60		-GM, 1	A-6, A-1-a,	0	0	133-87	133-87	122-75
	_	loam, fine sandy loam	SC-SM	A-2-4	_	_	_	_	_
	_	_	_		_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

To				Classification		Fragments	ents	ă —	Percentage pas	ge pas
wood, In Uniffi wely stony 0-1 Slightly decomposed PT 1-2 Loam PLant material ML, GC-G 2-3 Sandy loam, fine sandy CL, SC-S 2-3 Sandy loam, gravelly CL, GM, Gravelly 4-21 Loam, sandy loam CL, GM, Gravelly 1-2 Loam, fine sandy loam SC-SM, S Gravelly sandy loam SC-SM, S Gravelly sandy loam SC-SM, S Gravelly sandy loam CL, SM, G Gravelly sandy loam CL, SM, G Sandy loam CL, SM, G Sandy loam CL, SM, G Sandy loam CL, SM, G Sandy loam CL, SM, G Sandy loam CL, GP-G Sandy loam CL, GP-G Sandy loam CC-SM, G Sandy loam CC-SM, G Sandy loam CC-SM, G Sandy loam CC-SM, G Sandy loam CC-SM, G Sandy loam	unit symbol d soil name	Deptu	USDA texture			>10	3-10		sieve number	number
wood, In Slightly decomposed PT mely stony 0-1 Slightly decomposed PT 1-2 Loam Incam Incam Incam Inc. SC-S Scandy loam, gravelly Inc. GM, gravelly Inc. GM, gravelly Inc. GM, gravelly fine sandy Inc. GM, gravelly fine sandy Inc. GM, gravelly fine sandy Inc. GM, gravelly fine sandy Inc. GM, gravelly fine sandy Inc. GM, gravelly sandy loam Inc. GM, gravelly sandy loam Inc. GM, gravelly sandy loam Inc. GM, gravelly sandy loam Inc. SM, gravelly sandy loam Inc. SM, gravelly sandy loam Inc. SM, gravelly sandy loam Inc. GP-G Inc. Gravelly sandy loam Inc. GP-G					AASHTO	ni 	in	4	10	1 40
	501	In				Pct	Pct			
1-2 Loam ML, GC-G 2-3 Sandy loam, fine sandy CL, SC-S 1-2 Loam 3-4 Sandy loam, gravelly CL, GM, fine sandy loam CL, GM, 1-21 Loam, sandy loam CL, GM, 21-32 Loam, fine sandy loam SC-SM, S gravelly sandy loam SC-SM, S gravelly sandy loam SC-SM, S gravelly sandy loam CL, SM, 2-3 Fine sandy loam CL, SM, 3-4 Fine sandy loam CL, SM, 4-6 Loam, fine sandy loam CL, SM, 5-18 Sandy loam, loam, fine SC-SM, G 6-18 Sandy loam, loam, fine SC-SM, G 18-24 Gravelly sandy loam, CL, GP-G 10-am, fine sandy loam, SC-SM, S 10-am, fine sandy loam, SC-SM, S 10-am, fine sandy loam, SC-SM, S 10-am, fine sandy loam, SC-SM, S 10-am, fine sandy loam, SC-SM, S 10-am, fine sandy loam, GP-GM 10-am, fine sandy loam, GP-GM 10-am, fine sandy loam, GP-GM 10-am, fine sandy loam GP-GM	rtswood, tremely stony	0-1		 PT A-8		0	0	100	100	100
2-3 Sandy loam, fine sandy CL, SC-S loam		1-2	prancimateriar Loam	GC-GM, CL A-6,	A-2-4,	0	0	157-97	157-97	47-87
1-loam 1		2-3	loam,	SC-SM, GM/A-6,	A-1-b,	0	0	159-97	 59-97	 46-92
fine sandy loam		3-4	loam,	A-4 GM, SC-SM A-6,	A-1-b, I		0	 59-97	 59-97	 46–92
4-21 Loam, sandy loam, CL, GM,	- —		sandy	A-4	_	_		_		_
10am 10am 21-32 10am, fine sandy loam,		4-21	Loam, sandy loam, gravelly fine sandy	GM, GC-GM A-6, A-2-	A-1-b,	0	0	54-92 	54–92 	41–89
oro, mely stony 0-2 Slightly decomposed PT PT PT 2-3 Fine sandy loam NL, SM, S-1 4-6 Loam, fine sandy loam NL, SM, S-1 4-6 Loam, fine sandy loam CL, SM, S-1 5-18 Sandy loam, loam CL, SM, G-1 6-18 Sandy loam, loam, fine SC-SM, G-1 18-24 Gravelly sandy loam, CL, GP-G 18-24 Gravelly sandy loam, CL, GP-G 10-am, fine sandy loam, SC-SM 10-am, fine sandy loam, SC-SM 10-am, fine sandy loam, SC-SM 10-am, fine sandy loam, SC-SM 10-am, fine sandy loam, SC-SM		21-32	fine	SC A-6.	A-1-b		0	 61-88	 61-88	 42-77
oro, mely stony 0-2 Slightly decomposed PT		1) !	ellv s	-		,	,) 		!
oro,		32-60	fine	sc A-6,	A-1-b	0	0	161-88	61-88	42-77
			gravelly sandy loam 							
stony 0-2 Slightly decomposed PT	502 tsboro,									
Fine sandy loam ML, SM, Fine sandy loam OL, SM, Loam, fine sandy loam CL, SM, Sandy loam, loam, fine SC-SM, G Sandy loam CL, GP-G Cravelly sandy loam, CL, GP-G Loam, fine sandy loam, GC-SM Cravelly sandy loam, GC-SM Cravelly sandy loam, GC-SM Cravelly sandy loam, SC-SM Cravelly sandy loam, SC-SM Cravelly sandy loam, SC-SM Loam, fine sandy loam SC-SM, S		0-2	Slightly decomposed	PT A-8		0	0	100	100	100
Fine sandy loam, loam CL, SM, Loam, fine sandy loam CL, SM, Sandy loam, loam, fine SC-SM, G Gravelly sandy loam, CL, GP-G Loam, fine sandy loam, GC-SM Caravelly sandy loam, GC-SM Caravelly sandy loam, SC-SM Caravelly sandy loam, SC-SM Caravelly sandy loam, SC-SM Caravelly sandy loam, SC-SM		2-3	at mate	MS JS MS	D-4		c	187-100	174-100	 59-93
Loam, fine sandy loam CL, SM, SC-SM Sandy loam, loam, fine SC-SM, GM, CL sandy loam CL, GP-GM, Gravelly sandy loam SC-SM Gravelly sandy loam SC-SM Gravelly sandy loam SC-SM Gravelly sandy loam SC-SM Gravelly sandy loam SC-SM Gravelly sandy loam SC-SM Gravelly sandy loam GC-SM Loam, fine sandy loam GP-GM		3-4	sandy loam,	SM, SC-SM/A-6, A	A-2-4,	0	0	187-100	87-100 73-100 57-95	157-95
Loam, fine sandy loam CL, SM, SC-SM Sandy loam, loam, fine SC-SM, GM, CL Gravelly sandy loam, CL, GP-GM, Loam, fine sandy loam SC-SM Loam, fine sandy loam SC-SM Cravelly sandy loam, SC-SM Cravelly sandy loam SC-SM Cravelly sandy loam SC-SM Cravelly sandy loam SC-SM Loam, fine sandy loam GP-GM	_			A-4	_	_		_	_	_
Sandy loam, loam, fine SC-SM, GM, CL sandy loam Gravelly sandy loam, CL, GP-GM, loam, fine sandy loam SC-SM loam, fine sandy loam, GC, GP-GM, loam, fine sandy loam SC-SM Gravelly sandy loam, SC-SM		4-6	fine sandy	SM, SC-SM/A-6,	A-2-4,	 o	0	173-100	73-100 73-100 57-95	57–95
sandy loam CL, GP-GM, Cavelly sandy loam, CL, GP-GM, loam, fine sandy loam SC-SM Gravelly sandy loam, GC, GP-GM, Gravelly sandy loam, SC-SM Gravelly sandy loam, SC-SM loam, fine sandy loam GP-GM		6-18	loam, loam,	GM, CL A-6,	A-1-b,	0	0	150-100	50-100 50-100 33-87	 33-87
Gravelly sandy loam, CL, GP-GM, loam, fine sandy loam SC-SM Gravelly sandy loam, GC, GP-GM, loam, fine sandy loam SC-SM Gravelly sandy loam, SC-SM loam, fine sandy loam GP-GM	_		loam		_	_		_	_	_
Loam, fine sandy Loam SC-SM Gravelly sandy Loam, GC, GP-GM, Loam, fine sandy Loam SC-SM Gravelly sandy Loam, SC-SM, SC, Loam, fine sandy Loam GP-GM	_ ·	18-24	Gravelly sandy loam,	A-6,	A-1-a,	0	0	119-100	19-100 19-100 12-87	112-87
Gravelly sandy loam, GC, GP-GM, loam, fine sandy loam SC-SM Gravelly sandy loam, SC-SM, SC, loam, fine sandy loam GP-GM	_		loam, fine sandy loam	-SM A-1	_	_			_	
Loam, fine sandy loam SC-SM Gravelly sandy loam, SC-SM, SC, loam, fine sandy loam GP-GM		24-33	Gravelly sandy loam,	GP-GM, A-6,	A-1-a,	<u> </u>	0	124-75	124-75	116-65
Gravelly sandy loam, SC-SM, SC, loam, fine sandy loam GP-GM		0	Loam, fine sandy loam	A-Z-			•			0
The second		33-60	Gravelly sandy loam, loam: fine sandv loam	SC, A-6,	A-1-a, -4	0	0	133-87	133-87	22-75

Table 14. -- Engineering Properties -- Continued

Man init combol	Denth		Classif	Classification	Fragments	ents		Percentage pas	e pas
and soil name	1				>10	3-10			
			Unified	AASHTO	in 	in	4	01	40
1147502	In				Pot	Pct			
swartswood, extremely stony	0-1	 Slightly decomposed vlant material	- PT	A-8	0	0	100	100	100
	1-2	Loam	ML, GC-GM, CL	CL A-6, A-2-4,	0	0	157-97	57-97	47-87
	2-3	Sandy loam, fine sandy	CL, SC-SM, GM	GM A-6, A-1-b,	0	0	159-97	59-97	46-92
	3-4	Loam Sandy loam, gravelly fine candy loam	A-4 CL, GM, SC-SM A-6, a-4	A-4 A-6, A-1-b, A-4	0	0	159-97	59-97	46-92
	4-21	sandy 11y fi	GM, GC-GM, CL	CL A-6, A-1-b, A-2-4	0	0	54-92	54-92	41-89
- -	21-32	Loam, fine sandy loam,	SC-SM, SC	A-6, A-1-b	0	0	61-88	61-88	42-77
	32-60	gravelly sandy loam Loam, fine sandy loam, gravelly sandy loam	SC-SM, SC	A-6, A-1-b	0	0	61-88	61-88	42-77
 1147527 Udorthents	0-12	Loam	 - ML, GW, CL	A-6, A-4,	0-63	0	111-100	8-1001	06-9
	12-72	Loam, sand, loamy sand, sandy loam, fine sandy loam	SM, SC, GW	A-6, A-2-4, A-1-a	0-62	0	112-100	8-100	5-91
1147532 Udorthents	0-12	Loam	 MI, GW, CL	A-6, A-1-a, a-4	0-52	0	111-100	8-100	06-9
	12-72	Loam, sand, loamy sand, sandy loam, fine sandy loam	SC, GW, SM	A-6, A-1-a, A-2-4	0-52	0	112-100	8-100	5-91

Table 14. -- Engineering Properties -- Continued

Men + in: neW	1 4 4	A GOTT	Classi	Classification	Frag	Fragments	Ā	Percentage pas	ge pas
	1 1				>10	1 3-10			
			Unified	AASHTO	i n	ni n	4	10	40
1147533	In				Pct	Pct			
Wurtsboro,									
extremely stony	0-2	Slightly decomposed	PT	A-8	0	o 	100	100	100
_	2-3	Fine sandy loam	MI, SM, SC-SM	SC-SM A-2-4, A-4	0	· –	187-100	87-100 74-100	
_	3-4	Fine sandy loam, loam	SM,	A-6, A-2-4,	0	0	187-100	87-100 73-100	157-95
	•	1	2				120	70	
	4 - 6 0	Loam, Ilne sandy Loam 	CL, SM, SC-SM A-6, A-4	A-6, A-2-4, A-4	> 	> 	/3-100 	/3-100 /3-100 	でと - / c - / c
	6-18	Sandy loam, loam, fine	SC-SM, GM, CL	CL A-6, A-1-b,	0	0	150-100	50-100 50-100	33-87
	18-24	sandy loam Graye] sandy loam		A-2-4 A-6 A-1-3			119-100		12-87
	r N	loam, fine sandy loam		ب ۽	· 	· - –	2 -	2	4
_	24-33	_	GC, GP-GM,	A-6, A-1-a,	0	0	124-75	124-75	116-65
_		loam, fine sandy loam			_	_	_	_	_
	33-60		ISC-SM, SC,	A-6, A-1-a,	0	o 	133-87	133-87	122-75
		Loam, fine sandy Loam 	GP-GM	A-Z-4					
Swartswood,					_				
extremely stony	0-1	Slightly decomposed	IPT .	A-8	0	o 	100	100	100
	1-2	plant material Toam	I IMT. GC-GM. CT.	CT.18-6 8-2-4	c	c	157-97	157-97	147-87
-	l I					· - –	<u> </u>	: - -	
_	2-3	Sandy loam, fine sandy	ICI, SC-SM, GM	GM A-6, A-1-b,	0	0	159-97	159-97	146-92
							_ :	_ :	_ :
	3-4	loam,	CI, GM, SC-SM A-6,	A-6, A-1-b,	0	o 	159-97	59-97	46-92
	10-1	Iine sandy loam		71 A - 4 A - 1 - 1 - 1 - 1			15/1-02	15/1-02	111-00
-	1	elly fi	25	- 1	· - –	, - –	, -	-)
_		loam	_	_		_	_	_	_
	21-32	sandy	SC-SM, SC	A-6, A-1-b	0	0	161-88	161-88	42-77
	0	етту в			•		- 3		
	32-60	Loam, rine sandy loam, gravelly sandy loam	SC-SM, SC 	A-6, A-1-b 	o 	- 	PI - 88	1 61 -88	42-77
1948749									
Arnot	8-0	ery silt	SM, ML, GM	A-4,	0 0	5-10	160-85	155-80	45-80
	9T-8	Very channery silt loam, very channery	₩5	A-4, A-2, A-1		110-25	09-05-	- 47 -	56-021 -
	16-26	Loam Bedrock		-					
_		_	_	_	_	_	_	_	_

Table 14. -- Engineering Properties -- Continued

			Classi	Classification	 	Fragments		Percentage pas	ige pas
map unit symbol and soil name	l Depth	USDA texture				0 3-10		SIEVE	sieve number
	. _ _		Unified	AASHTO	਼-ਜ - – –		4	10	1 40
1948750	In				Pot	t Pct	<u> </u> 	ļ	
Arnot	0-8	Channery si] Very channer	SM, ML, GM	A-5, A-4, A A-4, A-2, A	A-2 A-1	0 5-10 0 10-25	160-85	155-80	45-80 20-55
	 16-26	loam, very channery loam Bedrock	:	;		 !			
1948751 Arnot	00 11 8	 	 - SM, ML, GM GM	 A-5, A-4, A a-4 a-2 a	A-2-4	0 5-10	160-85		 45-80 20-55
	16-26	loam, very changes loam loam Bedrock	<u>-</u>	, I	 	- ·			
1948774 Conotton	6-0	 Gravelly loam, gravelly	 SM, ML, GM	 A-4, A-2		0 - 5	 - 65-90	 45-80	 40-70
· — — •	9-45	sandy loam Very gravelly se loam, very grav	SC-SM, SM, GC-GM, GM	A-2		0 0-10	135-70	 25-50 	 25-40
	45-80 	loam, gravelly coarse sandy loam Stratified very gravelly sand to very gravelly loamy coarse	SM, SW-SM, GM, GW-GM	1		0 0-10		 15-60 	 15-40
1948775					. – – –				
Conotton	9 - 9 - 45	Gravelly los sandy loam Very gravell	SM, ML, GM SC-SM, SM,	A-4, A-2 A-2		0 - 0 - 10	185-90	125-50	40 - 70 25 - 40
_	45-80	loam, very gravelly loam, gravelly coarse sandy loam Stratified very gravelly sand to very	GC-GM, GM 	A-1		0 0-10	125-65	 15-60 	 15-40
		gravelly loamy coarse sand 							

Table 14. -- Engineering Properties -- Continued

- today	4	Contract GOST	Classi	Classification	Frag	Fragments	ă – -	Percentage pas	ge pas
and soil name	i di	בפסכם –			>10	1 3-10		D > D -1 0	
			Unified	AASHTO	цi	ni n	4	10	40
1948776	In				Pct	Pct			
Conotton	6-0	 Gravelly loam, gravelly	SM, ML, GM	A-4, A-2	0	0-5	165-90	45-80	140-70
	,	dy loam	;		C			- 6	- 10
	9-45	Very gravelly sandy losm wern gravelly	L CCISM SM,	Z-8-	>	0T-0	0/-65	06-67	125-40
_									
_		sandy loam				_	_	_	_
	45-80		SM, SW-SM,	A-1	0	0-10	125-65	115-60	15-40
- 		gravelly loamy coarse sand	F15 - W5 - F15						
1948777									
Conotton	6-0		SM, ML, GM	A-4, A-2	0	0-5	165-90	145-80	140-70
	;	sandy loam	_ :	_ :	•		_ :	_ :	_ :
	9-45		SC-SM, SM,	A-2	0	0-10	135-70	125-50	25-40
_		loam, very gravelly loam, gravelly coarse	GC-GM, GM						
				_		_	_	_	_
-	45-80	d very		A-1	0	0-10	125-65	115-60	115-40
-		sand t	GM, GW-GM	_		_	_	_	_
		gravelly loamy coarse							
_		- salid							
1948797		_	_	_		_	_	_	_
Manlius 	8-0	Channery silt loam 	ML, SM, CL-ML, GM	A-4, A-2	0	5-25	55-80 	50-75 	35-75
	8-24	Verv channerv silt	·	A-4, A-2, A-1	0	110-25	125-60	120-55	115-55
		loam, very channery					! _ .		
	24-32	Loam Verv channerv silt	I GW-GM. GM.	 A-4, A-2, A-1	0-1	110-25	115-60	110-55	 5-55
_		l loam, channery loam	GC-GM	ì		: - -	1 _	: : -	· –
	32-40	Bedrock	:		 	 	<u> </u>	 -	
1948802									
Manlius	8-0	Channery silt loam	MI, SM,	A-4, A-2	0	5-25	155-80	150-75	35-75
	8-24	 Verv channery silt	·	 A-4 A-2 A-1	c	110-25	125-60	120-55	115-55
_	! 	n, very ch				<u> </u>	<u> </u>	_	_
		loam				_	_	_	_
	24-32	Very channery silt losm channery losm	GW-GM, GM,	A-4, A-2, A-1 	0-1	110-25	115-60	110-55	5-55
_	32-40	~		 :	1				-
		_	_	_		_	_	_	_

Table 14. -- Engineering Properties -- Continued

- Codument + i care	4	4 84011	Classi	Classification	Frag	Fragments	<u>а</u>	Percentage pas	ge pas
and soil name	n Depui	OSDA CEXCUIE			>10	1 3-10	-, -	S T C	numper
			Unified	AASHTO	in	ni n	4	10	1 40
010010	In				Pct	Pct			
Totolo Manlius	8-0	 Channery silt loam 	MI, SM,	A-4, A-2	0	5-25	155-80	150-75	35-75
- 	8-24	Very channery silt Loam, very channery	GW-GM, GM, GC-GM	A-4, A-2, A-1	0	110-25	125-60	120-55	 15-55
_ 	24-32	loam Very channery silt loam, channery loam	GW-GM, GM, GC-GM	 A-4, A-2, A-1 	0-1	 10-25 	 15-60 	 10-55 	 5-55
-	32-40 	Bedrock 	!	 ¦	<u> </u>	¦ 	¦ 	¦ – –	<u> </u>
1948832 Penargyl	0-12	 Channery silt loam 	 SM, SC-SM, ML, CL, GM	 A-4, A-2	0-1	0-3	 65-85 	 65-80 	 40-75
	12-74	Cobbly silty clay loam, cobbly clay loam, cobbly loam	SC, CL-ML, CL	A-6, A-4, A-2-4	0-1	0-1	165-90	65-90 	25-75
	74-80	Very channery loam, channery silt loam, channery silty clay	GM, GC-GM	A-4, A-7, A-1, A-2	0-1	0-25	120-50	120-45	115-45
- 	06-08	Bedrock					¦ 	¦ - – –	:
1948846 Phelps	0-10	 Gravelly silt loam	SM, GC-GM,	 A-4, A-2, A-1	0	0-25	150-95	145-80	 25-75
	10-22	 Gravelly loam, gravelly	SC-SM, CL-ML, ML SM, GC-GM,	A-4, A-2	0	0-25	 50-95	 45-95 	 35-90
		cray toam, siic toam - -	CL-ML, GM, ML						
	22-30	Gravelly loam, gravelly clay loam, gravelly silt loam	SM, GC-GM, SC-SM, CL-ML, GM,	A-4, A-2	0	0-25	50-95 -	45-95 	35-90
	30-79	Stratified very gravelly sand to loamy sand	GW, GW-GM, GM, GP	A-1	0	5-30	115-55	110-50	5-40
1948855 Udorthents,			3			и С		00-100	
тоамуг	0	пьоап —	I ME	A-o, A-4, A-2 	>	0	80-100 	001-6/1	0T-cc
	5-40	Gravelly loam, loam,	ISC, SM, CL,	A-6, A-4, A-2	0	0-2	180-100	80-100 75-100	55-10
	40-70	ravelly s loam, si	MI, SC, CI,	A-4, A-6, A-1, A-2	0 - 2	0-10	35-100 	35-100 30-100 20-10 	20-10
-								_	_

Table 14. -- Engineering Properties -- Continued

	_	_	Classi	Classification	Fragments	ts	Percentage pas	pas
Map unit symbol	Depth	USDA texture	_		_	_	sieve number	mber
and soil name	_	_			>10 3-10	-10		
	_	_	Unified	AASHTO	l in l	_ ui	in 4 10 40	40
					_	_	_	
	In				Pct P	Pct		
1948989	_	_	_	_	_	-	_	
Delaware	0-10	0-10 Fine sandy loam, loam	SM, ML	A-4	- 0 -	0	100 95-100 75-95	75-95
	10-40	10-40 Fine sandy loam, very	SM, ML	A-4	0 - 0 -	0-1	99-100 95-100 70-90	06-04
	_	fine sandy loam	_	_	_	-	_	
	1 40-87	40-87 Loamy fine sand, fine	SM, ML	A-4, A-2	0 - 0 -	-5	0-5 95-100 95-100 80-95	30-95
	_	sandy loam, loamy sand	_	_	_	-	_	
	_	_	_	_	_	_	_	
	_				_	-	-	

Table 15.--Physical Soil Properties

[Sand, silt, and clay values are shown either as a range or as a representative value. Absence of an entry indicates that data were not estimated. Soil properties are measured or inferred from direct observations in the field or laboratory]

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
	In	'' <i>Pct</i>	Pct	Pct	g/cc		In/in	Pct	Pct
290836	1			I	_	1		1 1	
Hoosic, very	I	l I	1	I		1		1 1	
stony	0-1	0-47			0.13-0.23		0.35-0.45	0.0-0.0	70-100
	1-9				1.30-1.52			0.0-0.2	1.8-5.2
	9-21		15-50		1.45-1.57			0.0-0.1	
	•	82-98			0.67-1.58			0.0-0.1	
	•	82-98			0.67-1.58			0.0-0.1	
	• -	82-98	- '		0.67-1.58			0.0-0.1	0.0-0.5
	149-60	82-98	2-13	0-71	0.67-1.58	20.0-99.9	0.01-0.05	0.0-0.1	0.0-0.5
Otisville, very	! !	' '				! ! !		' '	
stony	I 0-1	0-76	0-26	0-141	0.13-0.23	, 5.9-20.0	0.35-0.45	0.0-0.0	70-100
2	1-2		15-26		1.24-1.68			1 0.0-0.5 1	1.8-5.2
	•	82-98			0.67-1.58			1 0.0-0.3 1	
	7-11	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.09-0.12	0.0-0.1	0.0-0.5
	11-19	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.05	0.0-0.1	0.0-0.5
	19-31	82-98			0.67-1.58		0.01-0.02	0.0-0.1	0.0-0.5
	•	82-98			0.67-1.58			0.0-0.1	0.0-0.5
	43-60	82-98	2-13	0-7	0.67-1.58	5.9-99.9	0.01-0.02	0.0-0.1	0.0-0.5
000005	!	!!!		. !		!!!		!!!	
296265 Alden	I I 0-9	ı ı I 26 I	53		1.10-1.40	I 0.6-2.0 I	0 16-0 22	 0.0-2.9	10-25
	0-9 9-35	1 20 1 1 18 1	54		1.20-1.50			1 0.0-2.9 1	0.0-1.9
	135-60	1 38 I	36		1.50-1.80	0.0-0.6	0.08-0.15		0.0-0.5
	1	, 50 , I I	30	10 33	1.50 1.60	1 1	0.00 0.15	1 0.0 2.5 1	0.0 0.5
296269	i	i i	i	i		i i		i i	
Fluvents,	1			I		1		1 1	
(alluvial land)	0-6	67	23	5-15	1.00-1.40	0.6-2.0	0.10-0.15	0.0-2.9	0.5-2.0
	6-42		20		1.00-1.45	0.6-6.0		0.0-2.9	0.0-0.3
	42-60	19	54	18-35	1.20-1.40	0.6-2.0	0.08-0.14	0.0-2.9	0.0-0.3
006071	!	!!!		. !		!!!		!!!	
296271 Alvira	 0-10	 44	41		1.40-1.60		0 14-0 20	 0.0-2.9	1.0-2.0
	110-21	1 44 I	54		1.40-1.60	1 0.6-2.0 1 1 0.6-2.0 1	0.14-0.20		0.0-0.5
	21-60		54		1.55-1.80		0.08-0.12		0.0-0.5
	1	' ' 		_0 00		i i	0.00 0.11		0.0 0.0
Watson	0-10	42	38	12-27	1.20-1.40	0.6-2.0	0.12-0.18	0.0-2.9	0.0-4.0
	10-27	18	54	17-35	1.40-1.60	0.6-2.0	0.12-0.16	3.0-5.9	0.0-0.3
	27-60	34	36	15-35	1.60-1.80	0.1-0.2	0.08-0.12	3.0-5.9	0.0-0.3
	1]		!!!	
296272	1						0 10 0 00		
Bath	0-8	32	56		1.10-1.40	0.6-2.0	0.10-0.20		3.0-6.0
	8-27	32	56		1.20-1.50 1.50-1.90			0.0-2.9	0.0-0.4
	27-60 60-64		56 44		1.50-1.80			0.0-2.9 0.0-2.9	0.0-0.4
	OO O-	1 1 0 1		5 10	1.50 1.00	1 0.0 0.2 1	0.01 0.00	1 0.0 2.5 1	0.0 0.4
296273	i	. '	i	, '		i i		į i	
Bath	0-8	32	56	5-18	1.10-1.40	0.6-2.0	0.10-0.20	0.0-2.9	3.0-6.0
	8-27	32	56	5-18	1.20-1.50		0.08-0.18	0.0-2.9	0.0-0.4
	27-60		56		1.50-1.90			0.0-2.9	
	60-64	46	44	3-18	1.50-1.80	0.0-0.2	0.01-0.06	0.0-2.9	0.0-0.4
000074	I	! !	!			ļ ļ		! !	
296274	1 0 0	1 20 1	E 6	[10.	1 10 1 40	1 0600	0 10 0 00	1 0 0 0 0 1	2060
	0-8 8-27	32	56 56		1.10-1.40 1.20-1.50			0.0-2.9 0.0-2.9	3.0-6.0
	8-27 27-60		56 56		1.50-1.50			0.0-2.9	
	27-60 60-64		44		1.50-1.90			0.0-2.9	0.0-0.4
	, 55 0-2	, -0 1		2 - 5		, 0.0 0.2	0.01	, 0.0 2.0 1	0.0 0.4

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Sand 	 Silt 	 Clay 	 Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential 	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
296275 Bath	I I 0−8	l I 32	l I 56	 5_10	 1.10-1.40	 0.6-2.0	0.10-0.20	 0 0-2 9	1.0-6.0
Datii	8-27	1 45	I 43		1.20-1.50	0.6-2.0 0.6-2.0	0.08-0.18		
	127-60	1 45	1 43		1.50-1.90	0.0-0.2	0.01-0.09		
	60-64	46	44		1.50-1.80	0.0-0.2	0.01-0.06		0.1-0.5
296276		! 	! !		 			! !	
Bath	0-8	32	56		1.10-1.40	0.6-2.0	0.10-0.20		
	8-27	45	43		1.20-1.50	0.6-2.0	0.08-0.18		
	27-60	45	43		1.50-1.90	0.0-0.2	0.01-0.09		
	60-64 	46 	44 	3-18 	1.50-1.80 	0.0-0.2 	0.01-0.06	0.0-2.9 	0.1-0.5
296277	į .	İ	İ			i i		i i	
Benson	0-8	26	54		1.40-1.60	0.6-2.0	0.14-0.20		2.0-6.0
	8-18	26 	54	10-30	1.40-1.70	0.6-2.0 	0.06-0.16	0.0-2.9	0.0-0.3
	18-22 		 	 	 	 		 	
296278	1	1	=4	10 20	 1.40-1.60	I I	0 14 0 20		2.0-6.0
Benson	0-8 8-18	26 26	54 54		1.40-1.60	0.6-2.0 0.6-2.0	0.14-0.20 0.06-0.16		0.0-0.3
	118-22	20 	34 	1	1.40-1.70	0.6-2.0 		0.0-2.9	0.0-0.3
		i	İ			i i		' 	
296279	I I 0-8	l I 26	l I 54	10 20	 1.40-1.60		0.14-0.20	1 0 0 0 0 1	2.0-6.0
Benson	8-18	1 26	1 54 I 54		1.40-1.60	0.6-2.0 0.6-2.0	0.14-0.20		0.0-0.3
	18-22					0.6 2.6		0.0 2.9	
296280	1	1	l	l		 			
Braceville	I I 0-3	I I 43	I I 40	I I 10-25	 1.20-1.40		0.08-0.12	I	1.0-3.0
DIACEVIIIE	1 3-30	1 29	I 53		1.20-1.50	1 0.2-2.0 1	0.08-0.12		
	130-55	1 43	1 40		1.30-1.60	0.1-0.6	0.06-0.10		
	55-60	91	5		1.20-1.40	2.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5
296281	1	 	 	 	 			l .	
Braceville	0-3	43	40	10-25	1.20-1.40	0.2-2.0	0.08-0.12	0.0-2.9	1.0-3.0
	3-30	29	53	10-25	1.20-1.50	0.2-2.0	0.08-0.12	0.0-2.9	0.0-0.5
	30-55	43	40	10-25	1.30-1.60	0.1-0.6	0.06-0.10	0.0-2.9	0.0-0.5
	55-60	91	5	1-10	1.20-1.40	2.0-20.0	0.03-0.06	0.0-2.9	0.0-0.5
296283	i	! 	! 			, , , ,		! 	
Buchanan	0-4	43	J 38		1.20-1.40	0.6-2.0	0.11-0.16		1.5-7.0
	4-25	39	37		1.30-1.60	0.6-2.0	0.10-0.16		0.1-3.0
	25-60 	38 	36 	18-35 	1.50-1.80 	0.1-0.2 	0.06-0.10	0.0-2.9 	0.1-0.5
296288	i .	i .	İ	i	i ,	i i		i i	
Chippewa		27	54		1.10-1.40		0.14-0.21		
	8-16		54		1.20-1.50		0.10-0.17		
	16-48	•	55 38		1.55-2.05		0.01-0.02		
	48-80 	40	30 	10-35 	1.50-1.80 	0.1-0.2 	0.01-0.02	0.0-2.9 	0.2-1.0
Norwich		27	54		1.10-1.40		0.14-0.20		
	8-16		55		1.20-1.50		0.11-0.18		
	16-48 48-80		54 53		1.55-2.05 1.50-1.80		0.02-0.04 0.01-0.02		
000000	!	!	!	!		ị i		<u> </u>	
296289 Chippewa	 0-8	l 27	l 54	I I 10-27	 1.10-1.40	 0.6-2.0	0.11-0.18	ı I 0.0−2.9 ∣	3.0-10
11	8-16		54		1.20-1.50	0.6-2.0	0.10-0.17		
	16-48		55		1.55-2.05		0.01-0.02	0.0-2.9	
	48-80	40	J 38	10-35	1.50-1.80	0.1-0.2	0.01-0.02	0.0-2.9	0.2-1.0
	1	1	l			l l		I I	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Sand 	 Silt 	 Clay 	Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential	matter
	 In	 Pct	 Pct	Pct	 g/cc	 	In/in	 Pct	Pct
296289	İ	i i	i	i i		i i		i i	İ
Norwich	0-8 8-16	27 22	54 55		1.10-1.40 1.20-1.50	0.6-2.0 0.6-2.0	0.12-0.18 0.11-0.18	•	3.0-10 0.5-5.0
	116-48	1 22	55 54		1.55-2.05	0.0-2.0	0.11-0.18	•	
	48-80	25	53		1.50-1.80	0.0-0.2	0.01-0.02	•	0.2-1.0
296295	 	 	l I	 		1 1			
Udorthents,	i	i i	İ	i i	İ	i i		i i	
cut and fill.	1		l			! !			
296297		! 	 	 		;			
Dekalb	0-7	44	41		1.20-1.50			0.0-2.9	
	7-24 24-32	68 67	20 23		1.20-1.50 1.20-1.50	6.0-20.0 6.0-20.0	0.06-0.12 0.05-0.10	0.0-2.9 0.0-2.9	0.0-1.0 0.0-1.0
	32-36	67	23		1.20-1.50	6.0-20.0	0.05-0.10	0.0-2.9	0.0-1.0
005000	ļ.	!!!	l	! !		!!!		1	
296298 Dekalb	I I 0-7	 44	 41	 10-20	1.20-1.50	6.0-20.0	0.08-0.12	I I 0.0-2.9	2.0-4.0
	7-24	68	20		1.20-1.50	6.0-20.0	0.06-0.12	•	0.0-1.0
	24-32	67	23	5-15	1.20-1.50	6.0-20.0	0.05-0.10	0.0-2.9	0.0-1.0
	32-36 	 	 	 					
296303	i	i i	i	i i	l	i i		i i	
	0-5 5-31	68 68	20 20		1.20-1.40 1.20-1.40	2.0-6.0 2.0-20.0	0.10-0.16 0.08-0.12	•	2.0-4.0
	131-58	I 68	20 22		1.20-1.40	2.0-20.0	0.08-0.12	•	0.0-0.4
	58-69	i i	i	i i		i i			
296304	1	 	 		<u> </u>	1 1			
Holly	0-8	20-45	40-60	15-27	1.20-1.40	0.6-2.0	0.20-0.24	0.0-2.9	2.0-5.0
	8-28				1.20-1.50			0.0-2.9	
	28-41 41-60	15-80 35-95			1.20-1.45 1.20-1.40		0.10-0.20 0.07-0.18	•	0.0-1.0 0.0-2.0
		33 33	1 1 30		1.20 1.40	1 0.0 0.0	0.07 0.10	0.0 2.3	0.0 2.0
296311	 0-8	 43	l I 38	10 27	1 20 1 40		0.10-0.16	1 0 0 2 0	1.0-3.0
Lackawanna	0-6 8-25	45	30		1.20-1.40 1.40-1.60	1 0.6-2.0 1	0.10-0.16	•	0.0-0.5
	25-60	32	56		1.50-1.90	0.1-0.2	0.06-0.12	•	
Bath	l l 0-8	l 32	l I 56	 5-18	 1.10-1.40		0.10-0.20	 0.0-2.9	3.0-6.0
Datii	8-27		55		1.20-1.50	0.6-2.0		0.0-2.9	
	27-60	30	55		1.50-1.90	0.0-0.2		0.0-2.9	
	60-64 	44 	41 	3-18 	1.50-1.80	0.0-0.2	0.01-0.06	0.0-2.9	0.1-0.3
296312	i	i i	i	i		i i		i i	
Lackawanna	•				1.20-1.40 1.40-1.60			0.0-2.9	
	•	20-75 20-75	•		1.50-1.90			0.0-2.9	
	ļ.	!!!	l	! !		!!!		!	
296313 Lackawanna	I I 0-8	I 20-50	l 1 20-60	 10-27	 1.20-1.40	1 0.6-2.0 1	0 10-0 16	l l 0.0-2.9	1.0-3.0
		20-75			1.40-1.60	0.6-2.0		0.0-2.9	
	25-60	20-75	20-60	5-18	1.50-1.90	0.1-0.2	0.06-0.12	0.0-2.9	0.0-0.5
296315		i 	! 	! ! 	! 				
Lackawanna		43	38		1.20-1.40			0.0-2.9	
	8-25		43 56		1.40-1.60			0.0-2.9	
	25-60 	, 32 	36 	2-T8	1.50-1.90 	0.1-0.2	0.06-0.12	0.0-2.9 	0.0-0.5
296316	Ì	i i	l	i i		i i		i i	
Lackawanna		43 45	38 43		1.20-1.40 1.40-1.60			0.0-2.9 0.0-2.9	
	8-25 25-60		43 56		1.50-1.90			0.0-2.9	
	1	ı	l	1	1	ı i		1	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt 	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential 	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
296317				[
Laidig	•	43	40 I		1.20-1.40	0.6-6.0	0.08-0.12		1.0-5.0
	6-33	38	36 36		1.30-1.50	0.6-6.0	0.08-0.12		
	33-65 	38 	36	18-35	1.45-1.80	0.0-0.6	0.06-0.10	0.0-2.9 	0.0-0.3
296326	i	i i	i	i		i i		i i	
Lordstown	0-7	31	56 I	8-18	1.10-1.40	0.6-2.0	0.11-0.17	0.0-2.9	1.0-6.0
	7-26	31	56 I		1.10-1.40	0.6-2.0	0.11-0.17	0.0-2.9	0.1-2.0
	26-30	32	56 I		1.20-1.50	0.6-2.0	0.05-0.14	0.0-2.9	0.0-1.0
	30-42		!	!					
296327		 	- '						
Lordstown	1 0-7	' 1 31	56 I	8-181	1.10-1.40	0.6-2.0	0.11-0.17	ı I 0.0-2.9 I	1.0-6.0
	7-26	. 31 i	56 i		1.10-1.40	1 0.6-2.0 1	0.11-0.17		0.1-2.0
	126-30	32	56 i	5-18	1.20-1.50	0.6-2.0	0.05-0.14	0.0-2.9	0.0-1.0
	30-42								
	!	!!!	!	!		!!!!		!!!	
296328 Lordstown	I I 0-7	 31	56 I	0 101	1.10-1.40		0.11-0.17	1 0 0 2 0 1	1.0-6.0
Lords town	1 7-26	ı 3⊥ ı I 44 I	40 I		1.20-1.50	0.6-2.0 0.6-2.0	0.11-0.17		0.1-2.0
	126-30	1 32 I	56 I		1.20-1.50	1 0.6-2.0 1	0.10 0.10		0.0-1.0
	30-42	J2 							
	I	l I	I	I		1		1 1	
Oquaga	0-7	43	40		1.10-1.40	0.6-2.0	0.08-0.17		1.0-6.0
	7-30	43	40 I	7-27	1.20-1.50	0.6-2.0	0.04-0.12	0.0-2.9	0.1-2.0
	30-42		!						
296329	i	; ;	i	i		iii		i i	
Mardin	0-8	15-45	35-70 j	5-18	1.10-1.40	0.6-2.0	0.10-0.20	0.0-2.9	1.5-7.0
	8-17	15-45	35-70	10-18	1.20-1.50	0.6-2.0	0.09-0.16	0.0-2.9	0.0-0.4
	17-21	15-45	35-70	10-18	1.20-1.50	0.6-2.0	0.09-0.16	0.0-2.9	0.0-0.4
					1.50-1.90		0.01-0.03		
	60-80	15-45	35-70	10-18	1.50-1.80	0.0-0.2	0.01-0.03	0.0-2.9	0.0-0.4
296330	1	! ! ! !							
	0-8	' 15-45	35-70	5-18	1.10-1.40	' 0.6-2.0	0.10-0.20	' 0.0-2.9	1.5-7.0
	8-17	15-45	35-70	10-18	1.20-1.50	0.6-2.0	0.09-0.16	0.0-2.9	0.0-0.4
	17-21	15-45	35-70	10-18	1.20-1.50	0.6-2.0	0.09-0.16	0.0-2.9	0.0-0.4
	•				1.50-1.90	0.0-0.2	0.01-0.03		0.0-0.4
	160-80	15-45	35-70	10-18	1.50-1.80	0.0-0.2	0.01-0.03	0.0-2.9	0.0-0.4
296331	!		!					!!!	
Mardin	I 0-8	ı ı 37	51 I	8-27 I	1.20-1.40		0.10-0.16	I	1.5-7.0
1101 0111	8-17				1.20-1.50	· ·	0.09-0.16	• :::: : : : :	
	17-21				1.20-1.50		0.09-0.16		
	21-60				1.50-1.90		0.01-0.03		
	160-80	30	56 I	10-18	1.50-1.80	0.0-0.2	0.01-0.03	0.0-2.9	0.0-1.0
	1	!!!		. !		!!!		!!!	
296332 Mardin	I I 0-8		51 I	0 271	1.20-1.40		0.10-0.16	1 0 0 2 0 1	1.5-7.0
Mardin	8-17	37 30	- •		1.20-1.40		0.10-0.16		
	17-21				1.20-1.50		0.09-0.16		
	21-60				1.50-1.90		0.01-0.03		
	160-80				1.50-1.80		0.01-0.03		
	1		I	I		1		l I	
296335	1 0 0	43	20 1	10 07	1 10 1 20	1 0600	0 10 0 10	1 0 0 0 0 1	1 0 4 0
Meckesville	0-9 9-36	43 38			1.10-1.30 1.20-1.40		0.12-0.16 0.12-0.16		
	9-36 36-60				1.45-1.85		0.12-0.16		
	160-64				1.20-1.40		0.08-0.12		

Table 15.--Physical Soil Properties--Continued

and soil name	Depth		Silt 	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	matter
		Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
296337 Meckesville	0 0	l I 43	 38		1.10-1.30		0.12-0.16	1 0 0 2 0 1	1.0-4.0
•	9-36	l 43			1.20-1.40	1 0.6-2.0	0.12-0.16		
•	36-60	I 38			1.45-1.85	0.0-2.0 0.2-0.6	0.10-0.14		
	60-64	40	38		1.20-1.40	0.2-0.6	0.08-0.12		
296338 I		 		 				 	
	0-8	26	54	15-25	1.20-1.40	0.6-2.0	0.10-0.14	0.0-2.9	2.0-8.0
1	8-17	29	54	10-30	1.10-1.70	0.0-0.2	0.06-0.08	0.0-2.9	0.2-4.0
1	17-70	29	54	10-30	1.60-2.05	0.0-0.2	0.06-0.08	0.0-2.9	0.1-0.6
1	70-80	29 	54	10-30	1.50-1.80	0.0-0.2	0.06-0.08	0.0-2.9	0.0-0.3
296339		İ				i i		' 	
Morris		26			1.20-1.40	0.6-2.0	0.12-0.16		2.0-8.0
	8-17	26			1.10-1.70	0.6-2.0	0.12-0.16		
•	17-70	39			1.60-2.05	0.0-0.1	0.06-0.08		
i	70-80	39 	37 	15-32 	1.50-1.80	0.0-0.1 	0.06-0.08	0.0-2.9 	0.1-0.6
296340		1					0.10.0.16		
Morris	0-8 8-17	26 26	54 54		1.20-1.40 1.10-1.70	0.6-2.0 0.6-2.0	0.12-0.16 0.12-0.16		2.0-8.0
•	17-70	1 39			1.60-2.05	0.6-2.0 0.0-0.1	0.12-0.16		
•	70-80	1 39	37		1.50-1.80	0.0-0.1	0.06-0.08		
i	70 00) 	10 52	1.30 1.00	0.0 0.1	0.00 0.00	0.0 2.5	0.1
296341 Freetown, mucky		 							
peat	0-6	' 		' ' ' 0 '	0.10-0.30	0.6-6.0	0.35-0.45	I	50-99
	6-72			i 0 i	0.15-0.30	0.6-6.0	0.35-0.45		
i	0-3 3-26 26-36 36-70	 66	 -3		0.15-0.40 0.80-0.90 1.00-1.20 1.40-1.60		0.35-0.45 0.35-0.45 0.20-0.40 0.11-0.20	0.0-2.9 0.0-2.9	
i			_0			i i i	0.11	i i	
296343		1	١ .	I . I		1		I	
Oquaga		43	40		1.10-1.40	0.6-2.0	0.08-0.17		1.0-6.0
•	7-30 30-42	43 	40 	7-27 	1.20-1.50	0.6-2.0 	0.04-0.12	0.0-2.9 	0.1-2.0
i		i i		i i		i i		i jiji ji	
Lackawanna		43	38		1.20-1.40	0.6-2.0	0.10-0.14		1.0-6.0
•	8-25 25-60	45 45	43 43		1.40-1.60 1.50-1.90	0.6-2.0 0.1-0.2	0.10-0.14 0.06-0.12		0.1-2.0
		İ		İ		į į		İ	
296344 Oquaga	0.7	l I 43	 40	7 07	1.10-1.40	1 0 6 0 0 1	0.08-0.17	1 0 0 0 0 1	1.0-6.0
	7-30	•	40		1.20-1.50		0.08-0.17		
	30-42								
 Lackawanna	0-8	l I 43	 38	 10-27	1.20-1.40		0.10-0.14	0 0-2 0	1.0-6.0
•	0-8 8-25	•			1.40-1.60		0.10-0.14		
	25-60	•	43		1.50-1.90		0.06-0.12		
296346 I		 		 				 	
Oquaga	0-7	43	40	7-27	1.10-1.40	0.6-2.0	0.08-0.17	0.0-2.9	1.0-6.0
	7-30	•	40		1.20-1.50		0.04-0.12		
	30-42	•		i i		i i		i i	
 Lackawanna	0-8	 43	38	ı 10-27	1.20-1.40		0.10-0.16	ı 0.0−2.9	1.0-6.0
		•			1.40-1.60		0.10-0.16		
•	8-25	45	43	5-18	1.40-1.60	0.6-2.0	0.10-0.16	0.0-2.9	0.1-2.0

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Shrink- swell potential	Organic matter
	i	! 	! 	! !	densicy	; ;	Capacity		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
296347	1 0 7	42	 40	7 07	1 10 1 40		0 00 0 17		1 0 6 0
Oquaga	0-7 7-30	43 43	40 40	7-27 7-27	1.10-1.40 1.20-1.50	0.6-2.0 0.6-2.0	0.08-0.17	0.0-2.9 0.0-2.9	1.0-6.0 0.1-2.0
	130-42								
	İ	i İ	İ	i i		i i		i i	
Lackawanna	0-8	43	J 38		1.20-1.40	0.6-2.0		0.0-2.9	1.0-6.0
	8-25	45	43		1.40-1.60	0.6-2.0		0.0-2.9	
	25-60	45	43	5-18	1.50-1.90	0.1-0.2	0.06-0.12	0.0-2.9	0.1-0.5
296348	 	 	l I	I		! ! ! !		: :	
Philo	0-10	, 30	, 56	 10-18	1.20-1.40	0.6-2.0	0.14-0.20	0.0-2.9	2.0-4.0
	10-40	70	16	10-18	1.20-1.40	0.6-2.0	0.10-0.20	0.0-2.9	0.0-2.0
	40-60	68	21	5-18	1.20-1.40	2.0-6.0	0.06-0.10	0.0-2.9	0.0-2.0
006040	1	!	!	<u> </u>		!!!		!!!	
296349 Pope	 0-10	I I 33	I I 57	 5_15	1.20-1.40	I 0.6-2.0 I	0.14-0.23	1 0 0-2 0 1	1.0-4.0
rope	110-30	I 32	I 56		1.30-1.60	0.6-2.0 0.6-6.0	0.14-0.23		0.0-0.5
	30-60	81	9		1.30-1.60	0.6-6.0	0.10-0.18	0.0-2.9	0.0-0.3
	İ	ĺ	İ	İ		i i		i i	
296350	1	1	l	I		1		1	
Pope	0-10	33	57		1.20-1.40	0.6-2.0	0.14-0.23		1.0-4.0
	10-30 30-60	32 81	56 9		1.30-1.60 1.30-1.60	0.6-6.0 0.6-6.0	0.10-0.18 0.10-0.18		0.0-0.5 0.0-0.3
	130-60	 0T	9 	5-20 	1.30-1.60	1 0.6-6.0 1	0.10-0.18	1 0.0-2.9	0.0-0.3
296351	i	i i	i i	i i		i i		i i	
Rexford,	I	I	I	1 1		1 1		1 1	
somewhat	!		!			1		! !	
poorly drained-		30	55		1.20-1.40	0.6-2.0		0.0-2.9	2.0-8.0
	8-18 18-40	30 45	56 41		1.20-1.50 1.50-1.90	0.1-0.2 0.1-0.2		0.0-2.9 0.0-2.9	
	140-63	•	22		1.20-1.40	2.0-20.0	0.03-0.06		0.0-0.6
	İ	ĺ	ĺ	İ		i i		i i	
Rexford, poorly	!		!			1		! !	
drained	•	30	55		1.20-1.40	0.6-2.0		0.0-2.9	2.0-8.0
	8-18 18-40	30 45	56 41		1.20-1.50 1.50-1.90	0.1-0.2 0.1-0.2		0.0-2.9 0.0-2.9	
	140-63	I 68	22		1.20-1.40	2.0-20.0	0.03-0.06		0.0-0.6
	i	İ	İ	i i		i i		i i	
296355	1	I	Ι .	I		1		1	
Sheffield	•	7	70		1.30-1.50	0.6-2.0	0.16-0.20		3.0-5.0
	7-19 19-38	7 7	63 63		1.45-1.70 1.60-1.90	0.2-0.6 0.0-0.1		0.0-2.9 0.0-2.9	
	138-66	, , , 7	l 65		1.55-1.85	1 0.0-0.1 1	0.10-0.14		0.0-0.3
		İ	 I	i		i i		i i	
296363	I	I	I	1 1		1 1		1 1	
Dystrochrepts,			l						
very stony		42	45		1.20-1.40			0.0-2.9 0.0-2.9	
	6-32 32-56		45 43		1.20-1.40 1.20-1.40			0.0-2.9	
	156-60								
	İ	ĺ	İ	İ		i i		i i	
296369	1	! <u>-</u>	l						
Wayland	0-9	7	64		1.05-1.40	0.2-2.0		0.0-2.9	
	9-41 41-60	7 37	64 43		1.10-1.60 1.25-1.55	0.1-0.2 0.1-0.2		0.0-2.9 0.0-2.9	0.0-1.0 0.0-1.0
	, 12 00 	, <i>3,</i> I	, 1 3	, 10 20 	1.23 1.33	, 0.1 0.2 	0.00 0.19	0.0 2.9	0.0 1.0
296376	İ	İ	İ	i		i i		i i	
Wellsboro	0-8	43			1.20-1.40			0.0-2.9	
	8-17		40		1.30-1.50			0.0-2.9	
	17-21				1.30-1.50			0.0-2.9	
	21-60 60-80		54 54		1.50-1.90 1.30-1.60			0.0-2.9 0.0-2.9	
	, 55 50		, 5-	/	1.50 1.00	!	0.00 0.10	1 0.0 2.9 1	0.0 0.4

Table 15.--Physical Soil Properties--Continued

296379 In Pct Wellsboro 0-8 43	40 40	10-27 10-27 10-27 10-27 10-27 	g/cc 1.20-1.40 1.30-1.50 1.30-1.50 1.50-1.90 1.30-1.60 1.10-1.40 1.10-1.50 1.30-1.60	In/hr	In/in 0.10-0.16 0.10-0.14 0.10-0.14 0.06-0.10 0.06-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	Pct 1.5-7.0 0.0-0.4 0.0-0.4 0.0-0.4 0.0-0.4
Wellsboro 0-8 43 8-17 43 17-21 43 121-60 29 60-80 29 296385 Wyoming 0-7 67 7-25 67 25-60 85	40 40 54 54 1 20 23 9 1 20 23	10-27 10-27 10-27 10-27 10-27 	1.30-1.50 1.30-1.50 1.50-1.90 1.30-1.60 1.10-1.40 1.10-1.50	0.6-2.0 0.6-2.0 0.6-2.0 0.1-0.2 0.1-0.2	0.10-0.14 0.10-0.14 0.06-0.10 0.06-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.4 0.0-0.4 0.0-0.4 0.0-0.4
8-17 43 17-21 43 21-60 29 60-80 29 296385 Wyoming 0-7 67 7-25 67 25-60 85	40 40 54 54 1 20 23 9 1 20 23	10-27 10-27 10-27 10-27 10-27 	1.30-1.50 1.30-1.50 1.50-1.90 1.30-1.60 1.10-1.40 1.10-1.50	0.6-2.0 0.6-2.0 0.6-2.0 0.1-0.2 0.1-0.2	0.10-0.14 0.10-0.14 0.06-0.10 0.06-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.4 0.0-0.4 0.0-0.4 0.0-0.4
17-21 43 121-60 29 60-80 29 296385 Wyoming 0-7 67 7-25 67 25-60 85	40 54 54 1 20 23 9 1 20 23	10-27 10-27 10-27 10-27 	1.30-1.50 1.50-1.90 1.30-1.60 1.10-1.40 1.10-1.50	0.6-2.0 0.1-0.2 0.1-0.2	0.10-0.14 0.06-0.10 0.06-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 	0.0-0.4 0.0-0.4 0.0-0.4
21-60 29 60-80 29 296385 Wyoming 0-7 67 7-25 67 25-60 85	54 54 20 23 9 20 23	10-27 10-27 1 8-18 5-15 1-11	1.50-1.90 1.30-1.60 1.10-1.40 1.10-1.50	0.1-0.2 0.1-0.2	0.06-0.10 0.06-0.10	0.0-2.9 0.0-2.9 	0.0-0.4 0.0-0.4
60-80 29 29	54 20 23 9 20 23	10-27 	1.30-1.60 1.10-1.40 1.10-1.50	0.1-0.2 	0.06-0.10	0.0-2.9 	0.0-0.4
Wyoming 0-7 67 7-25 67 25-60 85	23 9 1 20 23	5-15 5-15 1-11 	1.10-1.50	6.0-20.0			2 0-4 0
Wyoming 0-7 67 7-25 67 25-60 85	23 9 1 20 23	5-15 5-15 1-11 	1.10-1.50	6.0-20.0			2 0-4 0
7-25 67 25-60 85 	23 9 1 20 23	5-15 5-15 1-11 	1.10-1.50	6.0-20.0			
25-60 85 	9 20 23	1-11 			0.00 0.03	0.0-2.9	0.0-0.4
296386	23	 	1	1 1	0.02-0.04	0.0-2.9	0.0-0.4
	23	 8-19		: :		!!!	
Wyoming 0-7 67	23		 1.10-1.40		0.06-0.14	1 0.0-2.9 1	2.0-4.0
7-25 67	•		1.10-1.50	6.0-20.0	0.06-0.09		0.0-0.4
125-60 85	1 2		1.30-1.60	6.0-20.0	0.02-0.04		0.0-0.4
!!!	1	! !	<u> </u>	!!!		!!!	
296387	l l 20	0 10	 1.10-1.40		0.06-0.14	 0.0-2.9	2.0-4.0
Wyoming 0-7 67 7-25 67	1 23		1.10-1.40	6.0-20.0 6.0-20.0	0.06-0.14	1 0.0-2.9	0.0-0.4
125-60 85	1 23		1.30-1.60	6.0-20.0	0.02-0.04	0.0-2.9	0.0-0.4
i i	i	i i	İ	i i		i i	
296388					0.00.0.14		
Wyoming 0-7 67 7-25 67	20 23		1.10-1.40 1.10-1.50	6.0-20.0 6.0-20.0	0.06-0.14 0.06-0.09	, ,	2.0-4.0 0.0-0.4
7-25 67	23		1.30-1.60	6.0-20.0 6.0-20.0	0.08-0.09	1 0.0-2.9	0.0-0.4
i i	i	i i	İ	i i		i i	
296389					0.00.0.14		0 0 4 0
Wyoming 0-8 67 8-26 67	20 23		1.10-1.40 1.10-1.50	6.0-20.0 6.0-20.0	0.06-0.14 0.06-0.09		2.0-4.0 0.0-0.3
26-60			1.30-1.60	6.0-20.0 6.0-20.0	0.00-0.09	0.0-2.9	0.0-0.3
1 1	1		l			!!!	
297185	!	1 0			0 00 0 45		4 0 00
Edgemere 0-2 2-5 45	 43	0	0.50-0.90 1.10-1.40	0.6-2.0 0.6-2.0	0.23-0.45 0.12-0.18	0.0-2.9 0.0-2.9	4.0-20 2.0-8.0
5-24 45	1 43		1.20-1.50	1 0.6-2.0 1 1 0.6-2.0 1	0.12-0.18	1 0.0-2.9	0.0-1.0
24-66 67	20		1.70-2.00	0.1-0.2	0.02-0.04		0.0-1.0
1 1	1					! !	
Shohola 0-3 45	43		1.10-1.40	0.6-2.0	0.08-0.18		2.0-4.0
3-24 45 24-72 68	43 21		1.20-1.50 1.70-2.00	0.6-2.0 0.0-0.2	0.08-0.18 0.02-0.04	0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5
	21	1 0 15	1.70 2.00 	1 0.0 0.2 1	0.02 0.04	1 0.0 2.9 1	0.0 0.5
297186	1	1 1	l	1		1 1	
Edgemere 0-2			0.50-0.90			0.0-2.9	
2-5 45	43		1.10-1.40			0.0-2.9	
5-24 45 24-66 67	43 20		1.20-1.50 1.70-2.00			0.0-2.9 0.0-2.9	
24-00 07	1 20	1 0-10	1.70-2.00 	0.1-0.2 	0.02-0.04	0.0-2.9	0.0-1.0
297188	İ	i i	l	i i		i i	
Manlius 0-5 32	56		1.10-1.40			0.0-2.9	
5-24 45	43		1.20-1.50			0.0-2.9	
24-30 45 30-40	43	6-18 0	1.70-1.95 	0.6-2.0 0.0-0.2	0.03-0.09	0.0-2.9	0.0-0.4
30-40 		, U	 !	0.0-0.2 	0.00-0.00	·	
Arnot 0-3 45	42	8-18	1.10-1.40	0.6-2.0	0.10-0.15	0.0-2.9	2.0-8.0
3-14 45	42	8-18	1.20-1.50	0.6-2.0	0.08-0.12	0.0-2.9	0.1-3.0
14-24							

Table 15.--Physical Soil Properties--Continued

Map unit symbol	 Denth		 Silt	 Clav	 Moist	 Permeability	Available	 Shrink-	Organic
and soil name					bulk density	(Ksat)	water	swell potential	matter
	'———	Pct	Pct	Pct	 g/cc	In/hr	In/in	Pct	Pct
297189	1	1 20	l 5.0				0 00 0 10	1	
Manlius	0-5 5-24	32 45	56 43		1.10-1.40 1.20-1.50	0.6-2.0 0.6-2.0	0.08-0.12	0.0-2.9 0.0-2.9	2.0-8.0 0.0-1.0
	124-30	1 45	43 43		1.20-1.30 1.70-1.95	1 0.6-2.0 1	0.08-0.12	•	0.0-1.0
	30-40	i		0		0.0-0.2	0.00-0.00	•	
Arnot	I I 0-3	45	 42	 8-18	 1.10-1.40		0.10-0.15	 0.0-2.9	2.0-8.0
	3-14	45	42	8-18	1.20-1.50	0.6-2.0	0.08-0.12	0.0-2.9	0.1-3.0
	14-24				l				0.0-0.0
297190	<u> </u>		 		! 			 	
Braceville	0-11		22	5-15	1.15-1.40	2.0-6.0	0.15-0.21	•	2.0-8.0
	11-27		22		1.15-1.45	2.0-6.0		0.0-2.9	
	27-48		22 17		1.40-1.70	0.1-0.6		0.0-2.9	
	48-70 	79 	1 <i>/</i> 	2-7 	1.20-1.35 	2.0-20.0 	0.04-0.10	0.0-2.9 	0.0-0.5
297191	1		1	15 20			0 14 0 00		
Wyalusing	0-6 6-31	69 67	16 14		1.15-1.40 1.40-1.65	6.0-20.0 6.0-20.0	0.14-0.20	0.0-2.9 0.0-2.9	2.0-6.0 0.1-1.0
	31-70	80	17	2-9	•	6.0-20.0	0.02-0.10	•	0.1-0.5
297192	1] !	! !			
Pope	0-6	68	 22	 5-15	 1.20-1.40	2.0-6.0	0.10-0.16	0.0-2.9	1.0-4.0
	6-33	68	21	5-18	1.30-1.60	0.6-6.0	0.10-0.18	0.0-2.9	0.2-0.5
	33-70	68	20	5-20	1.30-1.60	0.6-6.0	0.10-0.18	0.0-2.9	0.1-0.8
297193	i		! 		! 	i i		! 	
Paupack	•				0.15-0.40		0.35-0.45	•	30-50
	3-26				0.80-0.90	0.2-6.0		0.0-2.9	
	26-36 36-70	 66	 23		1.00-1.20 1.40-1.60	0.2-2.0 0.2-2.0	0.20-0.40 0.11-0.20	•	2.0-10 0.0-2.0
297196	1] !	! !			
Freetown	1 0-6		 	1 0	 0.10-0.30	0.6-6.0	0.35-0.45	0.0-2.9	50-99
	6-72	j j		0	0.15-0.30	0.6-6.0	0.35-0.45	•	50-95
297197	1	 	 	 	 	 		 	
Manlius	0-5	32	56	6-18	1.10-1.40	0.6-2.0	0.10-0.18	0.0-2.9	2.0-8.0
	5-24		43		1.20-1.50	0.6-2.0	0.08-0.12	•	
	24-30 30-40	45	43	6-18 0	1.70-1.95	0.6-2.0 0.0-0.2	0.03-0.09	•	0.0-0.4
	30-40 		 	U	I I	0.0-0.2 	0.00-0.00		
297198	1		 EC				0 10 0 10	1	
Manlius	•	32 45	56 43		1.10-1.40 1.20-1.50			0.0-2.9 0.0-2.9	
	124-30		1 43		1.70-1.95			0.0-2.9	
	30-40			0	i	0.0-0.2	0.00-0.00	•	
297201	I I		 	 	I 	, l		[
Oquaga	0-2	1 43	40	7-27	1.10-1.40	0.6-2.0	0.08-0.17	0.0-2.9	2.0-8.0
	2-26		40		1.20-1.50			0.0-2.9	
	26-32 32-42	64	19 	7-27 	1.20-1.50 	0.6-2.0	0.04-0.12	0.0-2.9 	0.0-2.0
	1	i i	i	i	İ	i i		i	
297203 Delaware	 0-14	I 45-70	 10-50	 2-10	 1.15-1.40		0.15-0.21	 0.0-2.9	2.0-4.0
	•	45-90			1.15-1.45			0.0-2.9	
	48-72	45-90	0-40		1.25-1.55		0.04-0.10	0.0-2.9	
297204			 	 	 			 	
Delaware	0-14	64	30	2-10	1.15-1.40	2.0-6.0	0.15-0.21	0.0-2.9	2.0-4.0
	14-48		31		1.15-1.45			0.0-2.9	
	48-72		31		1.25-1.55	6.0-20.0	0.04-0.10	0.0-2.9	0.0-0.5
	I	1	I	I	I	1 1		I	l

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Sand 	 Silt 	 Clay 	 Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential 	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
297205 Delaware	I ·I 0−14	I I 64	I I 30	l l 2-10	 1.15-1.40		0.15-0.21	 0 0-2 9	2.0-4.0
Delawale	114-48	65	31	2-7		2.0-6.0	0.07-0.20	•	
	48-72	65	31	2-7	1.25-1.55	6.0-20.0	0.04-0.10	0.0-2.9	0.0-0.5
297209		1	 		1			1	
Philo	· 0-6	 45	 41	 10-18	 1.20-1.40	0.6-2.0	0.14-0.20	0.0-2.9	2.0-4.0
	6-36	70	16	10-18	1.20-1.40	0.6-2.0	0.10-0.20	0.0-2.9	0.0-0.5
	36-70		!	5-18	1.20-1.40	2.0-6.0	0.06-0.10	0.0-2.9	0.0-0.5
297210	1	I I	I I	 	l 			1	
	0-10	71	17	6-18	1.15-1.40	0.6-2.0	0.16-0.21	0.0-2.9	1.0-5.0
	10-38	71	17	6-18	1.15-1.45	2.0-6.0	0.10-0.19	0.0-2.9	0.0-0.5
	38-72	94	1	1-8	1.25-1.55	6.0-20.0	0.02-0.07	0.0-2.9	0.0-0.2
297216	i	i i	! 	! 	<u> </u> 	;			
Wurtsboro	0-4	70	16	10-18	1.20-1.40	0.6-2.0	0.10-0.16	0.0-2.9	2.0-4.0
	4-22	•	•	•	1.40-1.60	0.6-2.0	0.10-0.14	•	0.0-2.0
	22-70	70 	16	10-18 	1.60-1.80	0.1-0.2	0.08-0.12	0.0-2.9	0.0-0.5
297217	i	i	İ			iii		i	
Wurtsboro	0-4	68	21		1.20-1.40	0.6-2.0	0.10-0.16	0.0-2.9	2.0-4.0
	4-22	68	21		1.40-1.60	0.6-2.0	0.10-0.14	•	
	22-70	68 	21	5-18 	1.60-1.80 	0.1-0.2	0.08-0.12	0.0-2.9	0.0-0.5
297227	i	i	İ			iii		i	
Arnot	0-3	45	42	•	1.10-1.40	0.6-2.0	0.08-0.12	•	2.0-8.0
	3-10	45	42	•	1.20-1.50	0.6-2.0	0.08-0.12	•	0.1-3.0
	10-14 14-24	45 	42 	 8-18	1.20-1.50	0.6-2.0	0.08-0.12 0.00-0.00	•	0.0-2.0
		i	i	i		i i	0.00 0.00	i	
297228	1	!			l	! !		1	
Arnot	0-3 3-10	45 45	42 42	•	1.10-1.40 1.20-1.50	0.6-2.0 0.6-2.0	0.08-0.12 0.08-0.12	•	2.0-8.0 0.1-3.0
	110-14	1 45	I 42	•	1.20-1.50	1 0.6-2.0 1	0.08-0.12	•	0.1-3.0
	114-24			i		i i	0.00-0.00	i	
007000	1	!	l	<u> </u>		!!!!		!	
297229 Wyoming	I ·I 0−3	I I 67	I I 20	I I 8–18	 1.10-1.40		0.06-0.14	I 0.0-2.9	2.0-4.0
ny omining	3-33	68	22	•	1.10-1.50	6.0-20.0	0.06-0.09		0.0-0.5
	33-72	83	11	1-11	1.30-1.60	6.0-20.0	0.02-0.04	0.0-2.9	0.0-0.5
297230		1						1	
Wyoming	· 0-3	1 67	l 20	 8-18	 1.10-1.40	6.0-20.0	0.06-0.14	0.0-2.9	2.0-4.0
	3-33			5-15	1.10-1.50	6.0-20.0		0.0-2.9	
	33-72	83	11	1-11	1.30-1.60	6.0-20.0	0.02-0.04	0.0-2.9	0.0-0.5
297231	1	 	 	 	l i				
	0-3	67	20	 8-18	1.10-1.40	6.0-20.0	0.06-0.14	0.0-2.9	2.0-4.0
	3-33	•	22	5-15	1.10-1.50	6.0-20.0		0.0-2.9	
	33-72	83	11	1-11	1.30-1.60	6.0-20.0	0.02-0.04	0.0-2.9	0.0-0.5
297236		i	! 	!] 	·		 	
Suncook	0-10	81	17	1-3	1.10-1.30	6.0-20.0	0.07-0.12	0.0-2.9	2.0-5.0
	10-70	97	2	0-3	1.20-1.50	6.0-20.0	0.01-0.10	0.0-2.9	0.1-0.2
297237	1	1	I I]]			 	
	· 0-8	I I 30	ı 56	10-18	 1.10-1.40	0.6-2.0	0.11-0.17	0.0-2.9	3.0-7.0
	8-17	45	41		1.20-1.50	0.6-2.0	0.09-0.16	0.0-2.9	0.0-1.0
	17-21				1.20-1.50			0.0-2.9	
	21-30 30-60				1.50-1.90 1.50-1.90			0.0-2.9 0.0-2.9	
	160-80		•		1.50-1.90			0.0-2.9	
		İ				· · · · · · · · · · · · · · · · · · ·	, ,,,,,	1	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Sand 	 Silt 	 Clay 	 Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential 	matter
207226	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
297238 Mardin	I I 0-8	l I 30	l I 56	 10-18	 1.10-1.40	 0.6-2.0	0 11-0 17	 0.0-2.9	3.0-7.0
	8-17	1 45		•	1.20-1.50	0.6-2.0		0.0-2.9	
	17-21	45	41	10-18	1.20-1.50	0.6-2.0	0.09-0.16	0.0-2.9	0.0-1.0
	21-30				1.50-1.90		0.01-0.03		
	130-60	45	41	•	1.50-1.90	0.0-0.2		0.0-2.9	
	60-80	45	41	10-18	1.65-1.95	0.0-0.2	0.01-0.03	0.0-2.9	0.0-1.0
297239	 	! 	! 	 		! ! ! !		! !	
Mardin	0-8	45	41	10-18	1.10-1.40	0.6-2.0	0.11-0.17	0.0-2.9	3.0-7.0
	8-17	45	41	10-18	1.20-1.50	0.6-2.0	0.09-0.16	0.0-2.9	0.0-1.0
	17-21		41		1.20-1.50			0.0-2.9	
	21-30	45 45			1.50-1.90		0.01-0.03		
	30-60 60-80	•	41 41		1.50-1.90 1.65-1.95	0.0-0.2 0.0-0.2		0.0-2.9 0.0-2.9	0.1-0.5 0.0-1.0
	1	43	44	1 10 10	l 1.03 1.33	l 0.0 0.2 l	0.01 0.03	0.0 2.3	0.0 1.0
297240	I	I	I	I	l	l I		I I	
Mardin	0-8	45	41	•	1.10-1.40			0.0-2.9	
	8-17	45	41		1.20-1.50		0.09-0.16		
	17-21 21-30		41 41	•	1.20-1.50 1.50-1.90		0.09-0.16	0.0-2.9	
	130-60	1 45	41	•	1.50-1.90	1 0.0-0.2 1		1 0.0 2.9	
	60-80	•	41		1.65-1.95	0.0-0.2		0.0-2.9	
	I	I	I	I	l	l I		I I	
297241							0 10 0 01		0 0 0 0
Unadilla	0-13 13-49	21 21	69 70		1.20-1.50 1.20-1.50	0.6-2.0 0.6-2.0	0.18-0.21	0.0-2.9	2.0-8.0 0.0-1.0
	149-80	•	I 68		1.20-1.50	0.6 2.0 0.6-2.0		0.0-2.9	0.0-1.0
	i	i	i	i	i	i i		i i	
297242	1	I	I .	I	l	l		I	
Shohola	0-3	45	43		1.10-1.40	0.6-2.0	0.08-0.18		2.0-4.0
	3-24 24-72	45 68	43 21		1.20-1.50 1.70-2.00	0.6-2.0 0.0-0.2		0.0-2.9 0.0-2.9	
	24 /2	l 00	21	l 0 13	1.70 2.00 	0.0 0.2 	0.02 0.04	0.0 2.9 	0.0 0.3
Edgemere	•			0	0.50-0.90	0.6-2.0	0.23-0.45	0.0-2.9	
	2-5	45	43		1.10-1.40	0.6-2.0		0.0-2.9	
	5-24	•	23		1.20-1.50	0.6-2.0		0.0-2.9	
	24-66 	67 	20 	I 8-18	1.70-2.00 	0.1-0.2	0.02-0.04	0.0-2.9 	0.0-1.0
297243	i	i	i	i	İ	i i		i i	
Shohola	0-3	45	43		1.10-1.40	0.6-2.0	0.08-0.18		2.0-4.0
	3-24	45	43		1.20-1.50	0.6-2.0		0.0-2.9	
	24-72	68	21	8-15 	1.70-2.00	0.0-0.2	0.02-0.04	0.0-2.9	0.0-0.5
Edgemere	0-2	' 	' 	0	0.50-0.90	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	0.23-0.45	 0.0-2.9	4.0-20
•	2-5	45	43		1.10-1.40		0.12-0.18		
	5-24		23		1.20-1.50		0.11-0.18		
	24-66	67	20	8-18	1.70-2.00	0.1-0.2	0.02-0.04	0.0-2.9	0.0-1.0
297244	 	 	 	 	l i	 		! !	
Lordstown	0-3	 45	42	8-18	1.10-1.40	0.6-2.0	0.11-0.17	0.0-2.9	3.0-8.0
	3-28	•	16	5-26	1.20-1.50	0.6-2.0		0.0-2.9	
	28-30		23		1.20-1.50		0.05-0.14	0.0-2.9	
	30-40								
Swartswood	I I 0-4	I I 68	 16	I I 12-20	 1.20-1.40	 0.6-2.0	0.08-0.12	 0.0-2.9	5.0-10
	4-32	•	1 16		1.20-1.50			0.0-2.9	
	32-70	•	1 16	•	1.40-1.80			0.0-2.9	
000045	1	ļ .	ļ .	! :	<u> </u>	! I		<u> </u>	
297247 Chenango	I I 0-10	l I 70	l I 22	 5_10	 1.10-1.30	 0.6-6.0	0 08-0 16	 0.0-2.9	2.0-6.0
-	0-10 10-29		l 22		1.10-1.30			0.0-2.9 0.0-2.9	
	29-70	•	1 18		1.30-1.60	6.0-20.0		0.0-2.9	
	I	I	I	ı	l	ı i		ı	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	 Depth 		Silt	Clay	Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential	matter
·	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
297248 Chenango	 0_10	l l l 70 l	22	 	 1.10-1.30		0.08-0.16	 0.0-2.9	2.0-6.0
3 -	110-29	1 70 I 1 70 I	22		1.10-1.50	1 0.6-6.0 1	0.08-0.16		
	129-70	70 78	18	1-6		6.0-20.0	0.01-0.05	•	0.0-1.0
	I	l I				1 1		I I	
297249	1 0 10	70	22		1 10 1 20		0.08-0.16	1 0 0 0 0	2.0-6.0
-	0-10 10-29	70 70	22		1.10-1.30 1.10-1.50	0.6-6.0 0.6-6.0	0.08-0.16		
	29-70	, ,, , , 78	18	1-6		6.0-20.0	0.01-0.05	•	
	İ	i i		l i		i i		İ	
297253	1						0.00.045		
Craigsville	0-5 5-27	46 67	44 23		1.20-1.40 1.30-1.60	2.0-20.0 2.0-20.0	0.07-0.15 0.06-0.15	•	2.0-5.0 0.0-0.5
	127-77		9		1.35-1.55	2.0-20.0 6.0-20.0	0.04-0.09	•	0.0-0.5
	İ	 i i				i i		i	
	0-3	67	20		1.10-1.40		0.06-0.14	•	2.0-4.0
	3-33	68	22		1.10-1.50	6.0-20.0	0.06-0.09	•	
	33-72 	83 	11	T-TT	1.30-1.60	6.0-20.0	0.02-0.04	0.0-2.9	0.0-0.5
298049	i	i i				i i		i	
Wurtsboro,	I	l I				1 1		I I	
extremely stony	•	0-47			0.13-0.23	5.9-20.0	0.35-0.45	•	
	•	35-47 35-68			1.24-1.68	0.6-5.9	0.10-0.16	•	
		35-66 35-68			1.29-1.42 1.29-1.42		0.10-0.16 0.10-0.16	•	
	•	35-76			1.29-1.70		0.10-0.14		
	18-24	35-76	15-50	2-18	1.29-1.70	0.6-5.9	0.10-0.14	0.0-0.1	0.0-1.0
		35-76			1.64-1.98		0.08-0.12	•	
	130-60	35-76	15-50	2-18	1.64-1.98	0.1-0.2	0.08-0.12	0.0-0.1	0.0-0.5
298050	i	i i				i i		i	
Wurtsboro,	I	l I				1 1		I I	
extremely stony		0-68			0.13-0.23	5.9-20.0	0.35-0.45	•	
	•	53-68 35-68			1.24-1.68 1.29-1.42		0.10-0.16 0.10-0.16	•	
	•	35-68			1.29-1.42		0.10-0.16	•	
	•	35-76			1.29-1.70		0.10-0.14	•	
	•	35-76			1.29-1.70		0.10-0.14	•	
		35-76			1.64-1.98 1.64-1.98	0.1-0.2	0.08-0.12	•	
	133-60	35-76 	15-50	2-18	1.64-1.98	0.1-0.2	0.08-0.12	0.0-0.1 	0.0-0.5
Swartswood,	i	i i		İ		i i		i i	
extremely stony	0-1	0-47	0-50	0-18	0.13-0.23	•	0.35-0.45	0.0-0.0	70-100
					1.29-1.52		0.08-0.12		
	•	53-76 53-76			1.29-1.51 1.29-1.51		0.08-0.12 0.08-0.12	•	
		35-76			1.29-1.31		0.08-0.12		
		35-76			1.64-1.98		0.06-0.10		
	32-60	35-76	15-50	8-18	1.64-1.98	0.1-0.6	0.06-0.10	0.0-0.1	0.0-0.5
200051	1								
298051 Wurtsboro,	I I	, I		 		, l		! 	
extremely stony	0-2	0-68	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	2-3	53-68	17-44	2-17	1.24-1.68	0.6-5.9	0.10-0.16	0.0-0.2	1.8-5.2
	•	35-68			1.29-1.42		0.10-0.16		
		35-68 35-76			1.29-1.42 1.29-1.70		0.10-0.16 0.10-0.14	•	
	•	35-76 35-76			1.29-1.70 1.29-1.70		0.10-0.14		
		35-76			1.64-1.98		0.08-0.12		
	33-60	35-76	15-50	2-18	1.64-1.98	0.1-0.2	0.08-0.12	0.0-0.1	0.0-0.5
	I	l I				1 1		l I	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay 	bulk	Permeability (Ksat)	Available water	Shrink- swell	Organic matter
			!		density		capacity	potential	
	In	 Pct	Pct	Pct	g/cc	 In/hr	In/in	 Pct	Pct
298050	l	l I	I	 		I I		1 1	
Swartswood,	0 1		0 50		0 12 0 02		0 35 0 45		70 100
extremely stony	U-1 1-2	0-47 35-47	0-50 35-50		0.13-0.23 1.29-1.52	5.9-20.0 0.6-5.9	0.08-0.12	0.0-0.0 0.0-0.2	70-100 1.8-5.2
	1 2-3		15-44		1.29-1.51		0.08-0.12		
	3-4		15-44		1.29-1.51		0.08-0.12		0.5-2.0
	4-21	35-76			1.29-1.70	0.6-5.9	0.08-0.12		0.0-1.0
	21-32		15-50		1.64-1.98		0.06-0.10		0.0-0.5
	32-60	35-76	15-50	8-18	1.64-1.98	0.1-0.6	0.06-0.10	0.0-0.1	0.0-0.5
298075]	' ' 				i i		 	
Colonie	0-2	76-79	21-24	0-1	1.24-1.45	2.0-20.0	0.09-0.10	0.0-0.1	1.0-2.0
	2-11		21-24		1.24-1.45	2.0-20.0	0.09-0.10		1.0-2.0
	11-24	76-98			1.29-1.51		0.06-0.08		0.0-0.5
	24-40	76-98			1.29-1.51 1.29-1.51	2.0-20.0	0.06-0.08		
	40-62 	76-98 	2-24	U-T	1.29-1.51	2.0-20.0	0.06-0.08	0.0-0.1	0.0-0.5
298188		i i	i	i		i i		i i	
Lackawanna,	l	l I	1	I		1		I I	
extremely stony		0-68			0.13-0.23	5.9-20.0	0.35-0.45		70-100
	2-3 3-7		17-44		1.30-1.52		0.10-0.16		3.0-6.0
	3-7 7-8		17-44 17-44		1.29-1.42 1.29-1.59		0.10-0.16 0.10-0.16		0.0-2.0 2.0-6.0
	8-16		17-65		1.29-1.59		0.10-0.16		
		16-68			1.29-1.59		0.10-0.16		
	24-29	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
	29-60	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
298189	l I	 						 	
Lackawanna,	! 		i			iii		; ;	
extremely stony	0-2	0-68	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	2-3	53-68	17-44	2-17	1.30-1.52	0.6-2.0	0.10-0.16	0.0-0.1	3.0-6.0
	3-7		17-44		1.29-1.42		0.10-0.16		
	7-8		17-44		1.29-1.59		0.10-0.16		2.0-6.0
	8-16 16-24	16-68 16-68	17-65		1.29-1.59 1.29-1.59		0.10-0.16 0.10-0.16		
	24-29		15-65		1.64-1.98		0.06-0.12		
	29-60		15-65		1.64-1.98	0.1-0.2	0.06-0.12		0.0-0.5
	l		ļ	l l		ļ .		!!!	
298221 Swartswood,				 		! !		!!!	
extremely stony	 0-1	ı 1 0-47	0-50		0.13-0.23		0.35-0.45	I 0.0-0.0 I	70-100
excremely scony	1-2				1.29-1.52	1 0.6-5.9 1	0.08-0.12		1.8-5.2
		53-76		:	1.29-1.51			0.0-0.1	
		53-76			1.29-1.51			0.0-0.1	
		35-76			1.29-1.70			0.0-0.1	
		35-76 35-76			1.64-1.98 1.64-1.98			0.0-0.1 0.0-0.1	
	32-60 	35-70 	13-30	I 0-10	1.04-1.98	0.1-0.6	0.00-0.10	0.0-0.1 	0.0-0.5
298222	i i	i i	i	i		i i		i i	
Swartswood,	l	l I	1	l I		1		l I	
extremely stony		0-47			0.13-0.23			0.0-0.0	
		35-47 53-76			1.29-1.52			0.0-0.2 0.0-0.1	
		53-76 53-76			1.29-1.51 1.29-1.51			0.0-0.1 0.0-0.1	
		35 76 35-76			1.29-1.70			0.0-0.1	
		1	1	- 1					
		35-76 35-76			1.64-1.98	0.1-0.6	0.06-0.10	0.0-0.1	0.0-0.5

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
	'	'' <i>Pct</i>	Pct	 Pct	g/cc	In/hr	In/in	Pct	Pct
298223	İ	i i		İ		i i		i i	
Swartswood,	1	l I		l 1		1		1 1	
extremely stony	0-1	0-47			0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2				1.29-1.52		0.08-0.12		1.8-5.2
	2-3		15-44		1.29-1.51		0.08-0.12		
	•	53-76			1.29-1.51			0.0-0.1	0.5-2.0
	•	35-76			1.29-1.70			0.0-0.1	
	21-32 32-60		15-50		1.64-1.98		0.06-0.10	0.0-0.1 0.0-0.1	0.0-0.5
	132-60	35-76 	15-50	8-T9	1.64-1.98	0.1-0.6	0.06-0.10	1 0.0-0.1	0.0-0.5
298255	<u> </u>	, , , ,				! ! !		' '	
Delaware,	i	' '				; ;		; ;	
rarely flooded-	0-1	I 0-73	0-44	0-17	0.13-0.23	2.0-5.9	0.35-0.45	0.0-0.0	70-100
_	1-4		17-44		1.24-1.52		0.15-0.21		2.0-4.5
	4-11		17-44		1.24-1.52		0.15-0.21	0.0-0.2	
	11-20	53-68	17-44	2-17	1.29-1.42	2.0-5.9		0.0-0.1	
	20-33		17-44		1.29-1.42	2.0-5.9		0.0-0.1	0.0-0.5
	33-41		17-44		1.29-1.42			0.0-0.1	0.0-0.5
	41-56		12-49		1.29-1.42			0.0-0.1	0.0-0.5
	56-60	35-85	12-49	2-17	1.29-1.42	5.9-20.0	0.05-0.15	0.0-0.1	0.0-0.5
000056	!	!!!		. !		!!!		!!!	
298256 Delaware,	!								
rarely flooded-	 0-1	ı ı 0-73	0-44	I 1 I 0-17∣	0.13-0.23	2.0-5.9	0 35-0 45	1 0.0-0.0 1	70-100
rarely ricoded	1 1-4		17-44		1.24-1.52			1 0.0-0.2 1	2.0-4.5
	4-11		17-44		1.24-1.52			1 0.0-0.2 1	
	•	. 53-68 I			1.29-1.42			0.0-0.1	
	20-33	53-68	17-44	2-17	1.29-1.42	2.0-5.9	0.07-0.20	0.0-0.1	
	33-41	53-68	17-44	2-17	1.29-1.42	2.0-5.9	0.07-0.20	0.0-0.1	0.0-0.5
	41-56	35-85	12-49	2-17	1.29-1.42	5.9-20.0	0.07-0.20	0.0-0.1	0.0-0.5
	56-60	35-85	12-49	2-17	1.29-1.42	5.9-20.0	0.05-0.15	0.0-0.1	0.0-0.5
	1	l I		l I		1		1 1	
298257						! !			
Wallpack	•				1.34-1.54	•	0.16-0.20		1.3-3.3
	3-9				1.34-1.54			0.0-0.1	0.8-2.3
	9-16 16-25	11-76 11-76	15-65		1.29-1.73 1.71-1.98			0.0-0.1 0.0-0.1	0.0-0.5
	125-65		15-65		1.71-1.98	1 0.0-0.6	0.07-0.12		0.0-0.2
	123 03	11 /0 	13 03	2 20	1.71 1.50	1 0.0 0.0 1	0.07 0.14	1 0.0 0.1 1	0.0 0.2
298258	i	i i		i i		i i		i i	
Wallpack	0-3	16-32	51-65	13-17	1.34-1.54	0.6-5.9	0.16-0.20	0.0-0.1	1.3-3.3
-	3-9	16-32	51-65	13-17	1.34-1.54	0.6-5.9	0.12-0.20	0.0-0.1	0.8-2.3
	9-16	11-76	15-65	2-17	1.29-1.73	0.6-5.9	0.12-0.16	0.0-0.1	0.0-0.5
					1.71-1.98			0.0-0.1	
	25-65	11-76	15-65	2-20	1.71-1.98	0.0-0.6	0.07-0.14	0.0-0.1	0.0-0.2
	!	! I				1		! !	
298259	1	! !		 		<u> </u>		! !	
Wallpack,	1 0 1	ı 1	0 65		0 12 0 00		0 25 0 45	1 0 0 0 0 1	70 100
extremely stony		0-32			0.13-0.23 1.34-1.54			0.0-0.0 0.0-0.1	
		16-32 16-76			1.34-1.54			0.0-0.1	
		10-76 11-76			1.29-1.73			0.0-0.1	
		11 76 11-76			1.64-1.98			0.0-1.5	
	•	11-76			1.64-1.98			0.0-1.5	
		11-76			1.64-1.98			0.0-1.5	
	i							i ' '	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand Sand 	Silt	Clay	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
	'	'' <i>Pct</i>	Pct	Pct	g/cc	''. In/hr	In/in	Pct	Pct
298260	į	i i	i	i	5.	i i		i i	
Wallpack,	I		1			I I		1 1	
extremely stony	0-1	0-32	0-65	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2	16-32	51-65	13-17	1.34-1.54	0.6-5.9	0.18-0.23	0.0-0.1	1.0-20
	2-5	16-76	15-65	9-17	1.16-1.50	0.6-5.9	0.14-0.20	0.0-0.1	0.5-2.5
	5-18	11-76	15-65	9-17	1.29-1.73	0.6-5.9	0.14-0.18	0.0-0.1	0.0-0.5
	•	11-76			1.64-1.98			0.0-1.5	
		11-76			1.64-1.98			0.0-1.5	
	42-60	11-76	15-65	9-20	1.64-1.98	0.0-0.6	0.08-0.14	0.0-1.5	0.0-0.3
200261						! !		!!!	
298261 Wallpack	I I 0-3	ו 16−30. 16−30.	51_6F	12_17	1.34-1.54		0 16-0 20	1 0.0-0.1	1.3-3.3
паттраск	1 3-9				1.34-1.54	0.6-5.9		0.0-0.1	
	•		15-65		1.29-1.73		0.12-0.20		
		11 76 11-76			1.71-1.98		0.12 0.10		
	125-65		15-65		1.71-1.98	0.0-0.6	0.07-0.14		0.0-0.2
	1	,, 		,		1	0.0.		0.0 0.1
298262	į	i i	Ì	i		i i		i i	
Wallpack,	I		1			I I		1 1	
extremely stony	0-1	0-32	0-65	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2	16-32	51-65	13-17	1.34-1.54	0.6-5.9	0.18-0.23	0.0-0.1	1.0-20
	2-5	16-76	15-65	9-17	1.16-1.50	0.6-5.9	0.14-0.20	0.0-0.1	0.5-2.5
	5-18	11-76	15-65	9-17	1.29-1.73	0.6-5.9	0.14-0.18	0.0-0.1	0.0-0.5
	•	11-76			1.64-1.98			0.0-1.5	
	•	11-76			1.64-1.98			0.0-1.5	
	42-60	11-76	15-65	9-20	1.64-1.98	0.0-0.6	0.08-0.14	0.0-1.5	0.0-0.3
298265	!					!		!!!	
Venango,	!					! !		!!!	
extremely stony	 0-1	ı 0-281	0-55	0-221	0.13-0.23		0 35-0 45	0.0-0.0	70-100
extremely stony					1.03-1.54			1 0.0-0.0	
	1 0 6-16				1.29-1.62			0.0-0.1	
	116-22				1.64-1.86			0.0-0.1	
	122-34				1.64-1.86			0.0-0.1	
	134-60				1.64-1.86	1 0.0-0.2 1		0.0-0.1	0.1-0.3
	į	i i	Ì	i		i i		i i	
298266	1		1			I I		1 1	
Venango,		l I	- 1			1		1 1	
extremely stony	0-1	0-28			0.13-0.23	5.9-20.0		0.0-0.0	70-100
	1-6				1.03-1.54		0.17-0.20	0.0-0.2	2.0-4.0
	6-16				1.29-1.62		0.16-0.18		
	16-22				1.64-1.86			0.0-0.1	
	22-34	5-38	44-59	18-39	1.64-1.86	0.0-0.2		0.0-0.1	
	34-60	5-38	44-59	18-39	1.64-1.86	0.0-0.2	0.08-0.12	0.0-0.1	0.1-0.3
298409	I	ı I				i !			
Swartswood,	1	, l				! !			
extremely stony	I I ∩=1	ı ı 0-47	0-50	∩_1₽I	0.13-0.23		0 35-0 45	1 0.0-0.0 1	70-100
excremery scorry					1.29-1.52			0.0-0.0	
		53-47 53-76			1.29-1.51			0.0-0.2	
		53 76 53-76			1.29-1.51			0.0-0.1	
		35 76 35-76			1.29-1.70			0.0-0.1	
	•	35 76 35-76			1.64-1.98			0.0-0.1	
		. 35-76			1.64-1.98			0.0-0.1	
	1	, 55 .5, I I		0 -0					

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	 Depth 		Silt	Clay	bulk		Available water	Shrink- Swell	Organic matter
					density		capacity	potential	
	 In	 Pct	Pct	Pct	g/cc			 Pct	Pct
298411	İ	i i	İ	İ		i i		i i	
Swartswood,									
extremely stony		0-47			0.13-0.23			0.0-0.0	
	1-2 2-3	35-47 53-76			1.29-1.52 1.29-1.51			0.0-0.2 0.0-0.1	
	•	1 53-761			1.29-1.51			0.0-0.1	
	4-21		15-50		1.29-1.70	0.6-5.9	0.08-0.12		
	21-32		15-50		1.64-1.98	0.1-0.6	0.06-0.10	0.0-0.1	0.0-0.5
	132-60	35-76	15-50	8-18	1.64-1.98	0.1-0.6	0.06-0.10	0.0-0.1	0.0-0.5
000413	!	!!!				!			
298413 Swartswood,				 		1 1			
extremely stony	0-1	0-47	0-50	I 0-181	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
0	1 1-2				1.29-1.52			0.0-0.2	
	2-3	53-76			1.29-1.51		0.08-0.12	0.0-0.1	
	3-4	53-76			1.29-1.51			0.0-0.1	
	4-21		15-50		1.29-1.70		0.08-0.12		
		35-76			1.64-1.98			0.0-0.1	
	32-60	35-76	15-50	 8-T8	1.64-1.98	0.1-0.6	0.06-0.10	0.0-0.1	0.0-0.5
318498	<u> </u>	; ;							
Hazen,	i	i i		i		i i		i i	
very stony	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-10	35-47	35-50	10-18	1.30-1.52	0.6-5.9	0.12-0.18	0.0-0.2	1.8-5.2
			15-26		1.50-1.57			0.0-0.1	
		82-98			0.67-1.58		0.02-0.08		
	29-41 41-60				0.67-1.58 0.67-1.58	5.9-20.0 5.9-20.0	0.02-0.08 0.02-0.08		0.0-0.5 0.0-0.5
	141 00	1 02 301	2 13)	0.07 1.30	1 3.9 20.0 1	0.02 0.00	1 0.0 0.1	0.0 0.5
Hoosic, very	i	i i		İ		i i		i i	
stony	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-9				1.30-1.52		0.11-0.16		
	9-21		15-50		1.45-1.57	2.0-20.0	0.05-0.14		
		82-98 82-98			0.67-1.58 0.67-1.58	20.0-99.9 20.0-99.9	0.01-0.05 0.01-0.05		
	137-49				0.67-1.58	20.0-99.9	0.01-0.05		
	49-60						0.01-0.05		0.0-0.5
	1	1 1				1 1		1 1	
318533	!	!!!				!!!!		! !	
Hazen, very stony	 0-1	0-47	0-50	l ∩_18∣	 0.13-0.23	5.9-20.0	0.35-0.45	I 0 0-0 0 I	70-100
very scony	1 1-10				1.30-1.52	0.6-5.9		0.0-0.2	1.8-5.2
	10-18		15-26		1.50-1.57			0.0-0.1	0.2-1.0
	18-29	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.08	0.0-0.1	0.1-0.5
		82-98			0.67-1.58			0.0-0.1	
	41-60	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.08	0.0-0.1	0.0-0.5
Hoosic, very						1 1			
stony	 0-1	0-47	0-50	 0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
_					1.30-1.52		0.11-0.16		
	9-21	35-76	15-50	5-18	1.45-1.57	2.0-20.0	0.05-0.14	0.0-0.1	0.2-1.0
	•	82-98			0.67-1.58			0.0-0.1	
		82-98			0.67-1.58			0.0-0.1	
		82-98 82-98			0.67-1.58 0.67-1.58		0.01-0.05	0.0-0.1 0.0-0.1	
	= 9 - 00	02-30	2-13	0-7	0.07-1.56	20.0 33.3	0.01-0.05	0.0-0.1 	0.0-0.5
319783	i	i i		i		i i		i	
	0-2	0-30			0.13-0.23			0.0-0.0	
	2-13				0.13-0.23			0.0-0.0	
	13-20				0.13-0.23			0.0-0.0	
	20-32 32-60				0.13-0.23			0.0-0.0 0.0-0.0	
	32-60 	0-30	0-55	U-ZZ 		0.2-3.9	0.33-0.45	1 0.0-0.0	70-100
	•	. '		, ,	•	. '			

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
		 <i>Pct</i>	Pct	Pct	g/cc	 	In/in	 Pct	Pct
319784	1	FCC	1	100	9/00	111/111	111/ 111	1	FCC
Fredon, very	i	i i	i	i		i i		i	
stony	I 0-1	I 0-32 i	0-651	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-8				1.34-1.54	0.2-2.0	0.16-0.20		
	8-14	16-71	17-65	2-18	1.42-1.59	0.2-2.0	0.12-0.20	0.0-0.1	0.5-1.0
	14-18	16-71	17-65	2-18	1.42-1.59	0.2-2.0	0.12-0.20	0.0-0.1	0.5-1.0
	18-23	16-71	17-65	2-18	1.42-1.59	0.2-2.0	0.12-0.20	0.0-0.1	0.5-1.0
	23-31	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.06	0.0-0.1	0.0-0.5
	31-36	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.06	0.0-0.1	0.0-0.5
	•	82-98			0.67-1.58		0.02-0.06		
	•	82-98			0.67-1.58	5.9-20.0	0.02-0.06		
	55-60	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.06	0.0-0.1	0.0-0.5
Wales	1					!!!			
Halsey, very stony	 0-1	I 0-32	0−65	∩_10:	0.13-0.23		0 35-0 45	1 0.0-0.0	70-100
_	U-1 1-5				1.34-1.54		0.35-0.45		
	1 5 5-11				1.34-1.54		0.14-0.24		
		16 32 16-71			1.42-1.59		0.14 0.24		
	•	82-98			0.67-1.58	5.9-20.0	0.02-0.07		
	•	. 82-98 i			0.67-1.58		0.02-0.07		
	135-49	82-98			0.67-1.58	1 5.9-20.0 I	0.02-0.07		
	•	82-98			0.67-1.58	5.9-20.0	0.02-0.07		
	56-60	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.07	0.0-0.1	0.0-0.5
	1		!	!		!!!		! !	
543222	!	!!!	!	!		!!!		! !	
Andover,	1 0 0	42	20 1	10 201	1 00 1 40	1 0 6 0 0 1	0 00 0 00	1 0 0 0 0	1 0 4 0
extremely stony	0-8 8-17	43 34	38 38		1.20-1.40 1.20-1.40	0.6-2.0 0.6-2.0	0.08-0.20 0.08-0.12		1.0-4.0 0.0-0.5
	117-53		30 I		1.30-1.60	0.1-0.2	0.06-0.12		
	153-65		36		1.40-1.70	0.1-0.6	0.08-0.12		0.0-0.5
	1	, 50 , 		-0 -0,		i i i	0.00 0.11		0.0 0.0
Buchanan,	i	i i	i	i		i i		i i	
extremely stony	0-6	43	38	10-27	1.20-1.40	0.6-2.0	0.11-0.16	0.0-2.9	2.0-4.0
	6-23	39	37	18-30	1.30-1.60	0.6-2.0	0.10-0.16	0.0-2.9	0.0-0.5
	23-47	38	36	18-45	1.40-1.70	0.1-0.2	0.06-0.10	0.0-2.9	0.0-0.5
	47-61	38	36	18-45	1.40-1.70	0.1-0.2	0.06-0.10	0.0-2.9	0.0-0.1
E 420 42	1	!!!	. !	. !		! !			
543243 Berks	 0-10	I 45 I	41	5-22 I	1.20-1.50		0.08-0.12	1 0.0-2.9	2.0-4.0
	110-26		54 I		1.20-1.60	0.6-6.0 I		0.0-2.9	0.0-0.5
	126-33	1 46 1	42		1.20-1.60	1 2.0-6.0 1		0.0-2.9	0.0-0.5
	133-43	-				0.2-20.0	0.00-0.00		
	İ	i i	i	i		i i		i i	
Weikert	0-8	26	53	15-27	1.20-1.40	2.0-6.0	0.08-0.14	0.0-2.9	1.0-4.0
	8-15	26	53	15-27	1.20-1.40	2.0-6.0	0.04-0.08	0.0-2.9	0.0-0.5
	15-18	26	53	15-27	1.20-1.40	2.0-6.0	0.04-0.08	0.0-2.9	0.0-0.5
	18-20					0.6-20.0			
E42046	I		. !	. !		<u> </u>			
543246	I I 0-7	1 20 50	30 60	10 27	1 20.1 40	1 06-20 1	0 12 0 10	1 0 0.2 0	1.0-3.0
Buchanan	•				1.20-1.40 1.30-1.60	•		0.0-2.9 0.0-2.9	
	•				1.40-1.70			0.0-2.9	
	, 21 03 	, 20 30 	50 00	13 32	1.40 1.70	0.1 0.2	0.00 0.10	0.0 2.9	0.0 0.1
543247	i		i	i		i i		į i	
Buchanan,	i	i i	i	i		į į		į i	
extremely stony	0-3	20-50	30-60	10-27	1.20-1.40	0.6-2.0	0.12-0.18	0.0-2.9	1.0-3.0
					1.30-1.60		0.10-0.16	0.0-2.9	0.0-0.5
	21-65	20-50	30-60	15-32	1.40-1.70	0.1-0.2	0.06-0.10	0.0-2.9	0.0-0.1
	1	1 1				1		1 1	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt 	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
	 <i>In</i>			 Pct	g/cc	 		 Pct	 Pct
543257	İ	İ	i	i i		i i		i i	ĺ
Chippewa		27	•		1.00-1.30	0.6-2.0	0.18-0.22		3.0-10
	8-16	19 40			1.20-1.50	0.6-2.0	0.10-0.17		0.5-5.0
	16-48 48-80	40	38 38		1.55-2.05 1.50-1.80	0.0-0.2 0.0-0.2	0.01-0.02 0.01-0.02		0.2-1.0 0.2-1.0
543258	l I] 	l				 	[
Chippewa	0-8	27	54	10-27	1.00-1.30	0.6-2.0	0.18-0.22	0.0-2.9	3.0-10
	8-16	19	54	18-35	1.20-1.50	0.6-2.0	0.10-0.17	0.0-2.9	0.5-5.0
	16-48	40			1.55-2.05	0.0-0.2		0.0-2.9	
	48-80 	40 	38 	10-35	1.50-1.80	0.0-0.2	0.01-0.02	0.0-2.9	0.2-1.0
543259	i	i	i	i		i i		i i	
Chippewa,							0 44 0 40		
extremely stony	0-8 8-16	27 19			1.10-1.40 1.20-1.50	0.6-2.0 0.6-2.0	0.11-0.18	0.0-2.9 0.0-2.9	3.0-10 0.5-5.0
	6-16 16-48	I 40			1.55-2.05	1 0.0-2.0 1	0.10-0.17		
	48-80	40	38		1.50-1.80	0.0-0.2	0.01-0.02		0.2-1.0
543271	 	 -] I
Delaware	 0-10	l 68	21	l 2-20	1.15-1.40	1 2.0-6.0 1	0.15-0.21	 0.0-2.9	2.0-4.0
	10-40	62	34	2-7	1.15-1.45	2.0-6.0	0.07-0.20	0.0-2.9	0.0-0.5
	40-87	79	16	2-7	1.25-1.55	6.0-20.0	0.04-0.10	0.0-2.9	0.0-0.5
543276	! 	! 	 	! !		;		! !	
Fluvaquents		30	54		1.00-1.40	0.2-6.0	0.06-0.17		1.0-4.0
	6-62 	29 	30 	5-60 	1.00-1.50	0.1-0.6	0.03-0.17	0.0-2.9 	0.0-3.0
543292	i	i	i	i i		i i		i i	
Hazleton,							0 10 0 16		
extremely stony	0-6 6-43	46 45	42 43		1.20-1.40 1.20-1.40	2.0-6.0 2.0-20.0	0.10-0.16 0.08-0.12		2.0-4.0 0.0-0.5
	0-43 43-55	1 46	1 44		1.20-1.40	1 2.0-20.0 1	0.06-0.12		0.0-0.5
	55-80			i		2.0-6.0			
543293	 	 	l I]
Hazleton,	İ	İ	İ	i i		i i		i i	Ì
extremely stony	•	46	42	•	1.20-1.40	2.0-6.0	0.10-0.16		2.0-4.0
	6-43	45	43		1.20-1.40	2.0-20.0	0.08-0.12		
	43-60 60-80	46 	44 	 2-T2	1.20-1.40	2.0-20.0 2.0-6.0	0.06-0.12	0.0-2.9 	0.0-0.5
F42000	İ	I	l	İ		į į			
543299 Laidig,	! !	 	 	! !				! !	
extremely stony	0-3	43	40	7-27	1.20-1.40	0.6-6.0	0.08-0.12	0.0-2.9	2.0-4.0
	3-38	38			1.30-1.50			0.0-2.9	
	38-62 	42	38 	18-35	1.40-1.70	0.1-0.6	0.06-0.10	0.0-2.9	0.0-0.5
543300	i i	i		i i		i i		I	i i
Laidig,	I	40			4 00 4 40		0 00 0 10		
extremely stony	0-3 3-38	43 38	40 36		1.20-1.40 1.30-1.50			0.0-2.9 0.0-2.9	
	3-36 38-62	•	38		1.40-1.70	0.1-0.6		0.0-2.9	•
543304	l I	l]]
Laidig	' 0-3	 43	 40	 7-27	1.20-1.40	0.6-6.0	0.08-0.12	 0.0-2.9	 2.0-4.0
-	3-38	•			1.30-1.50			0.0-2.9	
	38-62	42	38	18-35	1.40-1.70	0.1-0.6	0.06-0.10	0.0-2.9	0.0-0.5
543327	! 	! 	l 	i 		, l		i 	!
Swartswood	0-11	44	40	12-20	1.20-1.40	0.6-2.0	0.08-0.12	0.0-2.9	2.0-4.0
	11-34	•			1.20-1.50			0.0-2.9	
	34-47	70	16		1.40-1.80	0.1-0.6		0.0-2.9	0.0-0.5

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand Sand 	Silt	Clay	Moist bulk density	 Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
E42220	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
543328 Swartswood	 0-11	1 44 I	40	 12-20	1.20-1.40	I 0.6-2.0 I	0.08-0.12	0.0-2.9	 2.0-4.0
	111-34	1 45 1	41	10-20		1 0.6-2.0 1	0.08-0.12	•	0.0-0.5
	34-47	70	16		1.40-1.80	0.1-0.6	0.06-0.10	•	0.0-0.5
543330	1	 				 		 	
Swartswood,	1		1			1 1		I I	
extremely stony			40		1.20-1.40	0.6-2.0	0.08-0.12	•	5.0-10
	11-34	44	41		1.20-1.50	0.6-2.0	0.08-0.12	•	0.0-1.0
	34-47 	70 	16	8-20	1.40-1.80	0.1-0.6	0.06-0.10	0.0-2.9 	0.0-0.5
Wurtsboro,	i	i i	i			i i		i	İ
extremely stony	0-10	44	41	10-20	1.20-1.40	0.6-2.0	0.10-0.16	0.0-2.9	1.0-3.0
	10-20	46	44		1.40-1.60	0.6-2.0	0.10-0.14	•	0.0-0.5
	20-64 	44 	41	10-20	1.60-1.80	0.1-0.2	0.08-0.12	0.0-2.9 	0.0-0.5
543331 Swartswood,	 		i			; 		 	
extremely stony	0-11	44	40	12-20	1.20-1.40	0.6-2.0	0.08-0.12	•	5.0-10
	11-34	44	41		1.20-1.50	0.6-2.0	0.08-0.12	•	0.0-1.0
	34-47 	70 	16	8-20	1.40-1.80	0.1-0.6	0.06-0.10	0.0-2.9	0.0-0.5
Wurtsboro,	i	i i	i			i i		i	
extremely stony	0-10	44	41		1.20-1.40	0.6-2.0	0.10-0.16	0.0-2.9	1.0-3.0
	10-20	45	41		1.40-1.60	0.6-2.0	0.10-0.14	•	0.0-0.5
	20-64	44	41	10-20	1.60-1.80	0.1-0.2	0.08-0.12	0.0-2.9	0.0-0.5
543359	i	i i	i			i i		i	
	0-8	22	55		1.10-1.40	0.6-2.0	0.09-0.14	•	2.0-8.0
	8-15	40	38 39		1.30-1.60	0.6-2.0	0.09-0.16	•	0.0-1.0
	15-70 70-80	43 42	39		1.60-2.05 1.50-1.80	0.0-0.2 0.0-0.2	0.01-0.02 0.01-0.02	•	0.1-0.5 0.1-0.6
543360	1	, i	J.	13 1.	1.30 1.00	1 1	0.01 0.02	1	1
Volusia,	!		!						!
extremely stony		22			1.10-1.40	0.6-2.0	0.11-0.17	•	2.0-8.0
	8-15 15-70	40 43	38 39		1.30-1.60 1.60-2.05	0.6-2.0 0.0-0.2	0.09-0.16 0.01-0.02	•	0.0-1.0 0.1-0.5
	70-80	42	37		1.50-1.80	0.0-0.2	0.01-0.02	•	0.1-0.6
543374	1		!]
	0-10	' 30	55	10-20	1.20-1.40	0.6-2.0	0.10-0.14	0.0-2.9	1.0-3.0
	10-20	45	41		1.40-1.60	0.6-2.0	0.10-0.14	•	0.0-0.5
	20-64	44	41	10-20	1.60-1.80	0.1-0.2	0.08-0.12	0.0-2.9	0.0-0.5
543375 Wurtsboro	I I 0-10	ı ı I 30 I	55 I	 10-20	 1.20-1.40		0.10-0.14	I I 0.0-2.9	 1.0-3.0
	110-20				1.40-1.60		0.10-0.14	0.0-2.9	
	20-64	44	41	10-20	1.60-1.80	0.1-0.2	0.08-0.12	0.0-2.9	0.0-0.5
612280	I I	 	 	 		1		I I]
	0-6	16-32	51-65	13-18	1.46-1.59	0.6-2.0	0.18-0.21	0.0-2.9	2.0-8.0
					1.46-1.59		0.18-0.21		
					1.44-1.59		0.17-0.20		
		16-71 16-71			1.44-1.59		0.17-0.20	•	
		16-71 16-71			1.44-1.59 1.44-1.59		0.17-0.20 0.10-0.19		
		16 71 16-71			1.44-1.59			0.0-2.9	•
612666	 	 	 					 	
	•	76-79			1.24-1.45		0.09-0.10	•	
	•	76-95			1.24-1.45			0.0-0.1	
	•	76-98			1.29-1.51			0.0-0.1	
		76-98 76-98			1.29-1.51 1.29-1.51			0.0-0.1 0.0-0.1	
		70 30 					0.00		

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	matter
	!	!!		<u></u> !		!!		!!	
612668	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
Hoosic, very	<u> </u>					; ;		; ;	
stony	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-9				1.30-1.52			0.0-0.2	
	9-21		15-50		1.45-1.57			0.0-0.1	
	•	82-98			0.67-1.58 0.67-1.58			0.0-0.1 0.0-0.1	
	•	82-98 82-98			0.67-1.58			0.0-0.1	
	49-60					20.0-99.9		0.0-0.1	0.0-0.5
Hazen,	 	 							
very stony		0-47			0.13-0.23			1 0.0-0.0 1	
	1-10				1.30-1.52			0.0-0.2	
	•	61-76 82-98			1.50-1.57 0.67-1.58			0.0-0.1 0.0-0.1	
	•	82-98			0.67-1.58			1 0.0 0.1 1	
	•	82-98					0.02-0.08	0.0-0.1	
612724	! !	 -				! ! ! !		! ! ! !	
Lordstown, very			0.50				0 05 0 45		E0 100
rocky	0-1 1-2	0-47			0.13-0.23 1.30-1.52			0.0-0.0 0.0-0.2	
	•	53-47 53-68			1.29-1.42			0.0-0.2	
	3-5				1.29-1.59			0.0-0.1	
	5-17	21-47	35-65	10-18	1.29-1.59	0.6-2.0	0.10-0.16	0.0-0.1	0.5-1.0
					1.29-1.59			0.0-0.1	
	122-36		17-65	2-18	1.29-1.70	0.6-2.0 	0.05-0.14	0.0-0.1	0.0-0.5
	36-80 			 		 			
Wallpack, very	i	i i		i		i i		i i	
rocky	0-1	0-32	0-65	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2				1.34-1.54			0.0-0.1	
	•	16-76			1.16-1.50			0.0-0.1	
		11-76 11-76	15-65		1.29-1.73 1.64-1.98			0.0-0.1 0.0-1.5	
	124-42		15-65		1.64-1.98			0.0 1.5 0.0-1.5	
	•	11-76			1.64-1.98			0.0-1.5	
612732	1	 						! ! ! !	
Atherton, very									
poorly drained-		0-30			0.13-0.23			0.0-0.0 0.0-0.0	
	2-4 4-8	0-30 20-30			0.13-0.23 1.34-1.54			0.0-0.0	
	8-10		17-59		1.34-1.54			0.0-0.1	
	10-18		17-59		1.56-1.73			0.0-0.1	
	18-29		17-59		1.56-1.73			0.0-0.1	
	29-32		17-59		1.56-1.73		0.10-0.19		
	32-41 41-45		17-59 17-59		1.56-1.73 1.42-1.70		0.10-0.19 0.05-0.12	0.0-0.1	
	41-45		17-59		1.42-1.70			0.0-0.1	
	150-60		17-59		1.42-1.70		0.05-0.12		
	60-70	5-71	17-59	2-35	1.42-1.70	0.6-5.9	0.05-0.12	0.0-0.1	0.0-1.0
Atherton,		. ! ! !						. ! ! !	
poorly drained-					1.10-1.40			0.0-0.1	
	6-12		17-59		1.25-1.55			0.0-0.1	
	12-30 30-40		17-59 10-59		1.25-1.55 1.45-1.65			0.0-0.1 0.0-0.1	
	140-60		10-59		1.45-1.65			0.0-0.1	
	1	i i				i i		i i	

Table 15.--Physical Soil Properties--Continued

						1			
Map unit symbol and soil name	 Depth 	 Sand 	Silt	Clay	Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential	Organic matter
		 Pct	Pct	Pct	g/cc	 In/hr	 In/in	Pct	Pct
612738 Fluvaquents, occasionally	 	 						 	
	5-12 12-18	20-50 20-80	50-80 5-80	12-27 7-35	1.20-1.40 1.30-1.50 1.20-1.50			0.0-2.9 0.0-2.9	0.0-0.5
	•	20-80 20-85 			1.20-1.50 1.20-1.70	0.6-2.0 2.0-20.0	0.12-0.18 0.04-0.08	0.0-2.9 0.0-2.9 	0.0-0.5 0.0-0.5
612753	i	i i				i i		i	
Wallpack, aeolian mantle, very	 	 	!					 	
stony	0-1	0-73	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2		17-44		1.24-1.52			0.0-0.2	
		53-73			1.24-1.52			0.0-0.2	
		16-68 16-68			1.29-1.42 1.29-1.42			0.0-0.1 0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
	31-36	16-68	17-65	2-18	1.29-1.42		0.07-0.20	0.0-0.1	0.0-0.5
	136-60	16-68	17-65	2-18	1.29-1.42	0.6-2.0	0.07-0.20	0.0-0.1	0.0-0.5
612756 Wallpack, aeolian	 								
mantle, very	i	' '	i			iii		i	
stony	0-1	0-73	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2		17-44		1.24-1.52			0.0-0.2	
		53-73			1.24-1.52			0.0-0.2	
		16-68 16-68			1.29-1.42 1.29-1.42			0.0-0.1 0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
	36-60 	16-68 	17-65	2-18 	1.29-1.42	0.6-2.0 	0.07-0.20	0.0-0.1 	0.0-0.5
612757	!					! !			
Wallpack, aeolian mantle, very	 		 			! ! ! !			
stony	0-1	0-73			0.13-0.23	5.9-20.0	0.35-0.45		70-100
	1-2		17-44		1.24-1.52 1.24-1.52	0.6-2.0	0.15-0.21		2.0-4.5
		53-73 16-68			1.24-1.52			0.0-0.2 0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
	21-26	16-68	17-65		1.29-1.42			0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
		16-68			1.29-1.42			0.0-0.1	
	36-6U 	16-68 	1/-65	Z-T8	1.29-1.42	0.6-2.0	0.07-0.20	0.0-0.1	0.0-0.5
612767	i	, ! !	ľ	·		; ; ;		·	
Wellsboro,	į	i i	i	İ		i i		i i	
extremely stony	•				1.34-1.54			0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59 1.29-1.59			0.0-0.1 0.0-0.1	
					1.64-1.98			0.0-0.1	
					1.64-1.98			0.0-0.1	
	Ì	i i	ĺ	l i		i i		i i	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	 Depth 		Silt	 Clay 	Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
612768 Wellsboro,								1	Ì
extremely stony	1 0-8	16-47	51-65	 13-18	1.34-1.54	 0.6-2.0	0.35-0.45	0.0-0.1	3.0-5.0
	8-15				1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
	•				1.29-1.59			0.0-0.1	
		16-76 16-76			1.64-1.98 1.64-1.98			0.0-0.1 0.0-0.1	•
613393		 				 		 	
Alden,									
extremely stony	I I 0-2	ı 0-30	0-55	 0-22	0.13-0.23		0 35-0 45	 0.0-0.0	 70-100
-	1 2-7				1.34-1.54			0.0-0.1	
	7-14	5-71	26-59	2-35	1.29-1.62		0.14-0.20	0.0-0.1	
	14-28		26-59		1.29-1.62			0.0-0.1	•
	28-43		26-59		1.29-1.62			0.0-0.1	
	43-60 	5-68 	17-59	8-35 	1.29-1.62 	0.1-0.6 	0.08-0.15	0.0-0.1 	0.0-0.5
613447	1	i į	i	l į		ı i		I j	l
Unadilla	1 0-8				1.46-1.59			0.0-0.2	
	8-14		26-65		1.46-1.59			0.0-0.2	
	•	16-71 16-71			1.44-1.59 1.44-1.59			0.0-0.2 0.0-0.2	•
	•	16-79			1.44-1.59			0.0-0.2	
613448	I								
	I 0-8	ı I 16-32	51-65	 13-18	 1.46-1.59		0.18-0.21	0.0-0.2	l 2.0-7.0
	8-14	16-71			1.46-1.59			0.0-0.2	
	14-25	16-71	26-65	2-18	1.44-1.59	0.6-2.0	0.17-0.20	0.0-0.2	0.0-1.0
		16-71 16-79			1.44-1.59 1.44-1.59			0.0-0.2 0.0-0.2	
	139-00	10-79 	21-05	0-18	1.44-1.59	2.0-20.0 	0.01-0.15	0.0-0.2 	0.0-0.5
614075	!							!	
Wurtsboro, extremely stony	I I 0-2	ı 0-681	0-44	 0-17	0.13-0.23	ı	0 35-0 45	0.0-0.0	 70-100
choremery beeny	1 2-3		17-44		1.24-1.68			0.0-0.2	
	3-4		17-50		1.29-1.42			0.0-0.1	
		35-68			1.29-1.42	0.6-5.9	0.10-0.16	0.0-0.1	0.5-2.0
		35-76			1.29-1.70			0.0-0.1	
		35-76 35-76			1.29-1.70 1.64-1.98			0.0-0.1 0.0-0.1	
	•	35-76			1.64-1.98			0.0-0.1	
Swartswood,	1	 				 		 	
extremely stony	0-1	0-47	0-50	0-18	0.13-0.23		0.35-0.45	0.0-0.0	 70-100
					1.29-1.52			0.0-0.2	
	2-3	53-76	15-44	2-17	1.29-1.51	0.6-5.9	0.08-0.12	0.0-0.1	0.0-1.0
					1.29-1.51			0.0-0.1	
		35-76 35-76			1.29-1.70			0.0-0.1	
	•	35-76 35-76			1.64-1.98 1.64-1.98			0.0-0.1 0.0-0.1	
620179	 			 				 	
Arnot,			. = -						
very rocky		0-47			0.13-0.23			0.0-0.0	
					1.30-1.42 1.29-1.42			0.0-0.2 0.0-0.1	
					1.29-1.42			0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
	•					! !		! !	
	I					ı I		I	I

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt 	Clay	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
620179		l I	ı			1		1 1	
Lordstown, very		l I	I			1		1 1	
rocky	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0		0.0-0.0	
					1.30-1.52	0.6-2.0		0.0-0.2	
	•	53-68			1.29-1.42			0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
		16-68			1.29-1.70			0.0-0.1	0.0-0.5
	36-80		!						
620180	1	 				! ! ! !		: :	
	0-1	ı 0-471	0-501	0-181	0.13-0.23	5.9-20.0	0.35-0.45	1 0 0-0 0 1	70-100
	•				1.30-1.42			0.0-0.2	
		. 53-681			1.29-1.42			0.0-0.1	
	•	53-68			1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
	12-17	16-47	35-65	10-18	1.29-1.59	0.6-5.9	0.08-0.12	0.0-0.1	0.0-0.5
	17-80								
	1	l I	- 1			1		1 1	
Lordstown	•	0-47			0.13-0.23			0.0-0.0	
					1.30-1.52			0.0-0.2	
		53-68			1.29-1.42			0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
		21-47 16-68			1.29-1.59 1.29-1.70		0.10-0.16	0.0-0.1 0.0-0.1	
	136-80		I	2-10	1.29-1.70	0.6-2.0 	0.05-0.14	1 0.0-0.1	0.0-0.5
	1	 	i			iii		i i	
620181	i	i i	i	i		i i		i i	
Arnot	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2	35-47	35-50	10-18	1.30-1.42	0.6-5.9	0.10-0.15	0.0-0.2	3.0-6.0
	2-3	53-68	17-44	2-17	1.29-1.42	0.6-5.9	0.08-0.12	0.0-0.1	0.0-0.5
	3-4	53-68	17-44	2-17	1.29-1.59	0.6-5.9	0.08-0.12	0.0-0.1	0.0-0.5
	4-12	16-47	35-65	10-18	1.29-1.59	0.6-5.9		0.0-0.1	0.0-0.5
			35-65	10-18	1.29-1.59		0.08-0.12	0.0-0.1	0.0-0.5
	17-80								
Lordstown	1 0 1		0-50 I	0 10	0.13-0.23	I	0.25.0.45	1 0 0 0 0 1	70 100
	0-1 1-2	0-47			1.30-1.52			0.0-0.0 0.0-0.2	
		53-47 53-68			1.29-1.42			0.0-0.2	
					1.29-1.59			0.0-0.1	
	•				1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.70			0.0-0.1	
	36-80		i			i i		i i	
	1	ı i	i	i		ı i		ı i	
623089	1	l I	- 1			1		1 1	
Chippewa,	1	I . I				I I		1	
extremely stony		0-30			0.13-0.23			0.0-0.0	
					1.03-1.54			0.0-0.2	
	4-8				1.16-1.50			0.0-0.1	
	8-13				1.16-1.62			0.0-0.1	
	13-21		17-59		1.71-1.98 1.71-1.98			0.0-0.1 0.0-0.1	
	21-29 29-34		17-59 17-59		1.42-1.98			0.0-0.1	
	29-34 34-60		17-59		1.42-1.98			0.0-0.1	

Table 15.--Physical Soil Properties--Continued

	1					1		· · · · · · · · · · · · · · · · · · ·	
Map unit symbol and soil name	 Depth 	 Sand 	Silt	Clay	bulk	 Permeability (Ksat)	Available water		Organic matter
		 	 		density		capacity	potential	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
623109 Farmington	 0-1	 0-32	0-65	 0_10	0.13-0.23		0 35-0 45		70-100
raiming con	1 1-3				1.34-1.54		0.12-0.22		
	3-9	16-71			1.29-1.58		0.08-0.20		
	9-15		17-65	2-18	1.29-1.58		0.05-0.15		0.0-1.0
	15-80 								
624811	i	i i				i i		i i	
Galway, very								! !	
rocky	0-2 2-3	0-47 0-47			0.13-0.23 0.13-0.23	5.9-20.0 2.0-5.9	0.35-0.45 0.35-0.45	0.0-0.0 0.0-0.0	
	•				1.12-1.30			0.0-0.1	
	5-15	16-68	17-65	2-18	1.29-1.58		0.08-0.19	0.0-0.1	0.0-1.0
		16-68	17-65	2-18	1.29-1.58	0.6-2.0	0.04-0.14	0.0-0.1	0.0-1.0
	24-80 	 				 		 	
624813	i	i i	i i	i i		i i		i i	
Lackawanna, extremely stony	1 0 2	 0-68	0-44	0 17	0.13-0.23		0 25 0 45	I 0.0-0.0 I	70-100
		53-68			1.30-1.52			0.0-0.0	
		53-68			1.29-1.42	0.6-2.0	0.10-0.16	0.0-0.1	0.0-2.0
		53-68			1.29-1.59			0.0-0.1	
	•	16-68 16-68			1.29-1.59 1.29-1.59			0.0-0.1 0.0-0.1	
		16-76			1.64-1.98			0.0-0.1	
	129-60	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
624816				 		! ! ! !		; ;	
Lordstown, very	İ	i i	i	İ		i i		i i	
rocky	•	0-47			0.13-0.23			1 0.0-0.0	
	1-2 2-3	33-47 53-68			1.30-1.52 1.29-1.42			0.0-0.2 0.0-0.1	
	•				1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
		21-4/ 16-68			1.29-1.59 1.29-1.70		0.10-0.16	0.0-0.1 0.0-0.1	
	36-80					i i		i i	
Wallpack, very	1								
rocky	0-1	0-32	0-65	0-17	0.13-0.23	5.9-20.0	0.35-0.45	 0.0-0.0	70-100
	1-2				1.34-1.54		0.18-0.23		
	2-5 5-18	16-76	15-65 15-65		1.16-1.50 1.29-1.73			0.0-0.1 0.0-0.1	
	•	11-76			1.64-1.98		0.08-0.16		
	24-42	11-76	15-65	9-20	1.64-1.98		0.08-0.14		0.0-0.3
	42-60	11-76	15-65	9-20	1.64-1.98	0.0-0.6	0.08-0.14	0.0-1.5	0.0-0.3
624822						;			
Lordstown		0-47			0.13-0.23		0.35-0.45		
					1.30-1.52 1.29-1.42		0.11-0.17	0.0-0.2 0.0-0.1	
	•				1.29-1.42		0.10-0.16		
					1.29-1.59			0.0-0.1	
	•				1.29-1.59		0.10-0.16		
	136-80			2-18	1.29-1.70	0.6-2.0 	0.05-0.14	0.0-0.1 	0.0-0.5
	İ	i i	i i	i i		i i		i i	
Wallpack					1.34-1.54		0.16-0.20		
					1.34-1.54 1.29-1.73		0.12-0.20 0.12-0.16		
	16-25	11-76	15-65	2-20	1.71-1.98	0.0-0.6	0.07-0.12	0.0-0.1	0.0-0.3
		11-76			1.71-1.98	0.0-0.6	0.07-0.14	0.0-0.1	0.0-0.2
	I	1 1				1 1		ı l	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt 	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	matter
		 <i>Pct</i>	Pct	Pct	g/cc	 <i>In/hr</i>	In/in	 Pct	Pct
624823	I	l I	I	- 1		1		I I	
Lordstown	•	0-47			0.13-0.23	5.9-20.0	0.35-0.45		
	•				1.30-1.52		0.11-0.17		
	•	53-68 16-47			1.29-1.42 1.29-1.59		0.10-0.16 0.10-0.16		
					1.29-1.59		0.10-0.16		
					1.29-1.59		0.10-0.16		
		16-68			1.29-1.70		0.05-0.14		
	36-80	i i	j	i		i i		i i	
Wallpack	U-3	16_32	61_65 I	12_171	1.34-1.54		0.16-0.20		1.3-3.3
-	•				1.34-1.54		0.16-0.20		
		10 32 11-76			1.29-1.73		0.12-0.16		
		11-76			1.71-1.98		0.07-0.12		
	25-65	11-76	15-65	2-20	1.71-1.98	0.0-0.6	0.07-0.14	0.0-0.1	0.0-0.2
604004	1		ļ	!		! !		! !	
624824 Lordstown	 0-1	I I I 0-471	0-50 I	0-181	0.13-0.23		0.35-0.45	I 0.0-0.0	70-100
202000011	1 1-2				1.30-1.52		0.11-0.17		
	2-3	53-68			1.29-1.42		0.10-0.16		
	3-5	16-47	35-65	10-18	1.29-1.59	0.6-2.0	0.10-0.16	0.0-0.1	0.5-1.0
					1.29-1.59		0.10-0.16	0.0-0.1	0.5-1.0
	•				1.29-1.59		0.10-0.16		
	•	16-68			1.29-1.70		0.05-0.14	0.0-0.1	0.0-0.5
	36-80 	 							
Wallpack	0-3	' 16-32	51-65	13-17	1.34-1.54	0.6-5.9	0.16-0.20	0.0-0.1	1.3-3.3
	3-9	16-32	51-65	13-17	1.34-1.54	0.6-5.9	0.12-0.20	0.0-0.1	0.8-2.3
		11-76			1.29-1.73		0.12-0.16		
		11-76			1.71-1.98		0.07-0.12		
	25-65 	11-76 	13-63	2-20	1.71-1.98	0.0-0.6 	0.07-0.14	I 0.0-0.1	0.0-0.2
624826	i	i i	i	i		i i		i i	
Manlius, very	1	l I	I	ı		1		1 1	
rocky	•	0-32			0.13-0.23		0.35-0.45		
					1.34-1.54		0.10-0.18 0.08-0.12		
	•				1.29-1.55 1.42-1.70		0.08-0.12		
	27-80								
	I	l I	I	- 1		1		I I	l
Nassau, very	 0-1	l I I 0-321	0-65 I	0 101	0.13-0.23		0.35-0.45	1 0 0 0 0 1	70-100
rocky	0-1 1-2				1.34-1.54		0.13-0.17		
	•				1.29-1.55		0.07-0.12		
	15-80					i i		i i	
	I	!!!	ļ	!		! !		! !	
624827 Nassau, very	 	 							
rocky	1 0-7	ı I 16-321	51-65 I	13-18	1 34-1 54	ı 16-59 I	0.13-0.17	I	3.0-5.0
_					1.29-1.55		0.07-0.12		
	13-80	i i	i	i		i i		i i	
Man 1 inc	1	!!!	. !	!		! !		[[
Manlius, very rocky	I I N=9	I 16-321	51-65 I	13-181	1 34-1 54	I 16-59 I	0.10-0.18	I	2.0-8.0
_					1.29-1.55		0.08-0.12		
					1.42-1.70		0.03-0.09		
	29-80	i i	i	i		i i		j j	
624828	1	 		!		! !			
Nassau, very	! 	, I I	l I			, , ,		1 	
· · · · - , · <u> 1</u>		16_22	51-651	13_10	1 3/1-1 5/	. 06-59 i	0.13-0.17		3.0-5.0
rocky	0-/	1 10-321	3± 031	13 10	1.34 1.34	1 0.0 3.9 1	0.13 0.17	1 0.0 0.1	3.0 3.0
-	7-13	16-47	35-65	10-18	1.29-1.55		0.07-0.12		

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt 	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
	' In	'' <i>Pct</i>	Pct	Pct	g/cc		In/in	Pct	Pct
624828	İ	i i	i	i	3,	i í	,	i i	
Manlius, very	I	l I	- 1			1		1 1	
rocky	0-9				1.34-1.54			0.0-0.1	2.0-8.0
	9-20				1.29-1.55	•		0.0-0.1	0.0-1.0
					1.42-1.70			0.0-0.1	0.0-0.0
	29-80								
624829	! !	! ! ! !				! ! ! !		1 1	
Nassau, very	! !	' '	i i	'		: :		: :	
rocky	I 0-7	16-32	51-65	13-18	1.34-1.54	0.6-5.9	0.13-0.17	0.0-0.1	3.0-5.0
-	7-13				1.29-1.55	0.6-5.9	0.07-0.12	0.0-0.1	0.0-1.0
	13-80	i i	j			i i		i i	
	I	l I	I	I		1		1 1	
Manlius, very	1					1		1	
rocky					1.34-1.54			0.0-0.1	2.0-8.0
			· · ·		1.29-1.55			0.0-0.1	0.0-1.0
	120-29		35-65 	10-18	1.42-1.70	0.6-5.9	0.03-0.09	0.0-0.1	0.0-0.0
	29-60 	, , , ,				 		 	
624832		' '	i	ľ		i i		i i	
Nassau	0-1	I 0-32	0-65	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2	16-32	51-65	13-18	1.34-1.54	0.6-5.9	0.13-0.17	0.0-0.1	3.0-5.0
	2-15	16-47	35-65	10-18	1.29-1.55	0.6-5.9	0.07-0.12	0.0-0.1	0.0-1.0
	15-80								
504044	!	! !	ļ			!!!		! !	
624841	I 0-1	I 0-47	0-50 I	0 101	0.13-0.23		0 25 0 45	1 0.0-0.0 1	70-100
Oquaga					1.30-1.52			0.0-0.0	2.0-8.0
		16-68			1.29-1.59			0.0-0.1	0.0-2.0
	•	16-76			1.29-1.70			0.0-0.1	0.0-1.0
	25-80		j	i		i i		i i	
	I	l I	ı	ı		1		1 1	
624845	I	l I	I	I		1		1 1	
Farmington	•	0-32			0.13-0.23			0.0-0.0	70-100
	1-3				1.34-1.54			0.0-0.1	2.0-5.0
		16-71			1.29-1.58			0.0-0.1	0.5-1.5
	9-15 15-80	16-71 	I	2-18	1.29-1.58	0.6-5.9 	0.05-0.15	0.0-0.1	0.0-1.0
	112-00	, , , ,				 		 	
Galway	I 0-2	0-47	0-501	0-181	0.13-0.23	5.9-20.0	0.35-0.45	1 0.0-0.0 1	70-100
-	1 2-3	0-47			0.13-0.23			1 0.0-0.0 1	70-100
	3-5	35-47	35-50	10-18	1.12-1.30	0.6-2.0	0.15-0.21	0.0-0.1	2.0-6.0
	5-15	16-68	17-65	2-18	1.29-1.58	0.6-2.0	0.08-0.19	0.0-0.1	0.0-1.0
	15-24	16-68	17-65	2-18	1.29-1.58	0.6-2.0	0.04-0.14	0.0-0.1	0.0-1.0
	24-80								
624946	I	! !	!	. !		I I		<u> </u>	
624846 Arnot	I I 0−1	 0-47	0-50 I	 -191	0.13-0.23		0 35-0 45		70-100
					1.30-1.42			0.0-0.0	
					1.29-1.42			0.0-0.2	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
						1 0.0 0.0 1			
					1.29-1.59			0.0-0.1	

Table 15.--Physical Soil Properties--Continued

						1 '		1	
Map unit symbol and soil name	 Depth 		Silt	 Clay 	 Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential	Organic matter
	i	ii		i	l	ii		I	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
626816 Udifluvents, occasionally	 			 	 				
flooded	0-3	43-85		2-12	1.30-1.50	5.9-20.0	0.11-0.17	0.0-2.9	3.0-5.0
	3-16	43-85			1.25-1.55	5.9-20.0	0.02-0.08		
	•	65-90 65-90			1.25-1.55 1.25-1.55	2.0-5.9 2.0-5.9	0.02-0.08	0.0-2.9 0.0-2.9	
	•	65-90 65-90			1.25-1.55	1 2.0-5.9 I	0.02-0.08		
		43-85			1.25-1.55	5.9-20.0	0.02-0.08		0.0-3.0
	1				l	! !		! !	
635458	1					! !			
Oquaga, very rocky	0-1	ı 0-471	0-50	I I 0-18	I 0.13-0.23	5.9-20.0	0.35-0.45	I 0.0-0.0 I	70-100
	1-4				1.30-1.52			0.0-0.1	
	4-20	16-68	17-65		1.29-1.59		0.04-0.12		
	20-25	16-76	15-65	2-18	1.29-1.70	0.6-2.0	0.04-0.12	0.0-0.1	0.0-1.0
	25-80								
Lackawanna,	i	' ']	' '		' 	
very rocky	0-2	0-68	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	2-3		17-44		1.30-1.52		0.10-0.16		
		53-68			1.29-1.42			0.0-0.1	
	7-8 8-16	53-68 16-68	17-44		1.29-1.59 1.29-1.59			0.0-0.1 0.0-0.1	
		16-68			1.29-1.59			0.0-0.1	
		16-76			1.64-1.98		0.06-0.12	0.0-0.1	
	29-60	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
635459	1					! !			
Oquaga, very	i	' '				; ;		;	
rocky	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-4				1.30-1.52			0.0-0.1	
	4-20		17-65		1.29-1.59		0.04-0.12		
	20-25 25-80	16-76 	15-65	2-18	1.29-1.70	0.6-2.0	0.04-0.12	0.0-0.1	0.0-1.0
	1	i i				i i		i	
Lackawanna,	İ	i i		ĺ	l	i i		i i	
very rocky		0-68			0.13-0.23	5.9-20.0	0.35-0.45		70-100
	2-3 3-7		17-44 17-44		1.30-1.52 1.29-1.42		0.10-0.16	0.0-0.1 0.0-0.1	
	7-8		17-44		1.29-1.59		0.10 0.16		
	•	16-68	17-65		1.29-1.59		0.10-0.16	0.0-0.1	
	16-24		17-65		1.29-1.59			0.0-0.1	
					1.64-1.98			0.0-0.1	
	129-60	16-76 	15-65	l 2-18	1.64-1.98 	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
740953	i	i i				i i		i	
Delaware,	1			l	l	1 1		1 1	
rarely flooded-			0-44		0.13-0.23			0.0-0.0	
	1-4 4-11	53-73			1.24-1.52 1.24-1.52			0.0-0.2 0.0-0.2	
	111-20				1.29-1.42			0.0-0.2	
	20-33				1.29-1.42			0.0-0.1	
	33-41				1.29-1.42			0.0-0.1	
	41-56				1.29-1.42			0.0-0.1	
	56-60 	35-85 	12-49	2-17 	1.29-1.42 	5.9-20.0	0.05-0.15	0.0-0.1	0.0-0.5
740968	i	, ' 			! 	·		· '	
Nassau, very	I	ıi		ı	l	ı i		ı	
rocky					1.34-1.54			0.0-0.1	
		16-47 		10-18 	1.29-1.55 	0.6-5.9	0.07-0.12	0.0-0.1	0.0-1.0
	113-80	, 		, 	 	, 		, 	-
						•			

Table 15.--Physical Soil Properties--Continued

Map unit symbol	 Depth			Clay	Moist	 Permeability	Available		Organic
and soil name	 	 	-	- <u>-</u> 	bulk density	(Ksat) 	water	swell potential	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
740968 Manlius, very	1	 							
rocky	0-9	 16-32	51-65	13-18	1.34-1.54	0.6-5.9	0.10-0.18	0.0-0.1	2.0-8.0
	9-20				1.29-1.55		0.08-0.12		
	20-29 29-80	16-47 	35-65 	10-18	1.42-1.70 	0.6-5.9 	0.03-0.09	0.0-0.1 	0.0-0.0
	İ	i i	i	i		i i		i i	
740969 Nassau, very									
rocky	0-7	 16-32	51-65	13-18	1.34-1.54	0.6-5.9	0.13-0.17	0.0-0.1	3.0-5.0
	7-13			10-18	1.29-1.55	•	0.07-0.12		0.0-1.0
	13-80 	 				 		 	
Manlius, very	i	i i	i	i		i i		İ	
rocky	•				1.34-1.54		0.10-0.18		
	•				1.29-1.55 1.42-1.70		0.08-0.12 0.03-0.09		
	29-80		i	i		i i		i i	
740971		 						 	
Oquaga, very	i	i i	i	i		i i		i i	
rocky	•	0-47			0.13-0.23		0.35-0.45		
	•	35-47 16-68			1.30-1.52 1.29-1.59		0.08-0.17 0.04-0.12		
	•	16-76			1.29-1.70		0.04-0.12		
	25-80		[[
Lackawanna,	! 	, , , ,						! !	
very rocky		0-68			0.13-0.23		0.35-0.45		
	•	53-68 53-68			1.30-1.52 1.29-1.42		0.10-0.16 0.10-0.16		
		53-68			1.29-1.59		0.10-0.16		
	•	16-68			1.29-1.59		0.10-0.16		
	•	16-68 16-76			1.29-1.59 1.64-1.98		0.10-0.16 0.06-0.12		
	•	16-76			1.64-1.98		0.06-0.12		
740972	1		. !						
Oquaga, very	i	' ' 		ľ		; ;		<u>.</u>	
rocky		0-47			0.13-0.23		0.35-0.45		
	1-4 4-20	35-47 16-68			1.30-1.52 1.29-1.59		0.08-0.17 0.04-0.12		
	•	16-76			1.29-1.70		0.04-0.12		
	25-80		[
Lackawanna,	 	, , , ,		ľ		; ; ;		! 	
very rocky	•				0.13-0.23		0.35-0.45		
	•	53-68 53-68			1.30-1.52 1.29-1.42		0.10-0.16 0.10-0.16		
	•	53-68			1.29-1.59		0.10-0.16		
		16-68			1.29-1.59		0.10-0.16		
		16-68 16-76			1.29-1.59 1.64-1.98		0.10-0.16 0.06-0.12		
		16-76 16-76			1.64-1.98		0.06-0.12		
740074	1		. !						
740974 Oquaga	 0-1	ı I 0-47	 0−50	0-18	 0.13-0.23		0.35-0.45	ı 0.0-0.0	70-100
	1-4	35-47	35-50	10-18	1.30-1.52	0.6-2.0	0.08-0.17	0.0-0.1	2.0-8.0
					1.29-1.59 1.29-1.70		0.04-0.12 0.04-0.12		
				2-18		0.6-2.0 	0.04-0.12	0.0-0.1 	
	I	ı i	i	i		ı i		ı i	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	matter
	i	ii	i	ii	i	ii		ii	
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
740975 Arnot			0 50	0 10			0.25.0.45	1 0 0 0 0 1	70 100
Arnot	•	0-47			0.13-0.23 1.30-1.42			0.0-0.0 0.0-0.2	
	•	33-47 53-68			1.29-1.42			0.0-0.2	
	•	53-68 53-68			1.29-1.59			0.0-0.1	
	•				1.29-1.59			1 0.0-0.1	
	•				1.29-1.59	0.6-5.9		0.0-0.1	0.0-0.5
	17-80					i i			
740987	1		!						
Scio	I 0-6	ı I 16-32 I	51-65	 13–18	1.46-1.59		0 18-0 21	0.0-2.9	2.0-8.0
5010	6-13				1.46-1.59			0.0-2.9	
	•	16-71			1.44-1.59			0.0-2.9	
	•	6 :-: 16-71			1.44-1.59			0.0-2.9	
	•	16-71			1.44-1.59			0.0-2.9	
	•	16-71			1.44-1.59			0.0-2.9	
	•	16-71			1.44-1.59			0.0-2.9	
740988 Udifluvents,	 			 				 	
occasionally	1		- 1			I I		1 1	
flooded	0-3	43-85	5-45	2-12	1.30-1.50	5.9-20.0	0.11-0.17	0.0-2.9	3.0-5.0
	•	43-85			1.25-1.55	5.9-20.0		0.0-2.9	
	•	65-90			1.25-1.55			0.0-2.9	
	•	65-90			1.25-1.55			0.0-2.9	
	•	65-90 43-85			1.25-1.55 1.25-1.55	2.0-5.9 5.9-20.0		0.0-2.9 0.0-2.9	0.0-3.0 0.0-3.0
	32-60 	43-65	3-43	2-12	1.25-1.55	5.9-20.0 	0.02-0.08	0.0-2.9	0.0-3.0
740991	İ	İ	į	İ		i i		i i	
Unadilla					1.46-1.59			0.0-0.2	2.0-7.0
	•	16-71			1.46-1.59			0.0-0.2	
	•	16-71			1.44-1.59			0.0-0.2	
	•	16-71 16-79			1.44-1.59 1.44-1.59	0.6-2.0 2.0-20.0	0.17-0.20	0.0-0.2 0.0-0.2	0.0-1.0 0.0-0.5
	139-60	10-79 	21-05	0-16	1.44-1.59	2.0-20.0 	0.01-0.15	0.0-0.2 	0.0-0.5
740992	1	1				1		1	
Unadilla	0-8				1.46-1.59	0.6-2.0		0.0-0.2	2.0-7.0
	8-14		26-65		1.46-1.59		0.18-0.21		
	•	16-71			1.44-1.59			0.0-0.2	
	•	16-71 16-79			1.44-1.59 1.44-1.59			0.0-0.2 0.0-0.2	
	139-60	16-79 	21-65	0-16	1.44-1.59	2.0-20.0 	0.01-0.15	0.0-0.2 	0.0-0.5
740995	į	į į	į			į į		į į	
Wellsboro,	1 0 0		E1 65	1 1 2 1 1 1	1 24 1 54	1 0 6 0 0 1	0 25 0 45	1 0 0 0 1	2050
extremely stony								0.0-0.1	
					1.29-1.59 1.29-1.59			0.0-0.1	
	•				1.29-1.59			0.0-0.1 0.0-0.1	
					1.29-1.59			0.0-0.1	
		16-76 16-76			1.64-1.98			0.0-0.1	
	I	ı i	i	l i		ı i		ı i	
740996	1		1			1			
Wellsboro,									
extremely stony								0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
	•				1.64-1.98 1.64-1.98		0.06-0.12	0.0-0.1	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
	'	'' <i>Pct</i>	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
741149	į	i i	Ì	i		i i	•	i i	
Lackawanna,	I	1 1				1		1 1	
extremely stony	0-2	0-68	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	2-3	53-68	17-44	2-17	1.30-1.52	0.6-2.0	0.10-0.16	0.0-0.1	3.0-6.0
	3-7	53-68	17-44	2-17	1.29-1.42	0.6-2.0	0.10-0.16	0.0-0.1	0.0-2.0
	7-8	53-68	17-44	2-17	1.29-1.59		0.10-0.16	0.0-0.1	2.0-6.0
	•	16-68			1.29-1.59			0.0-0.1	
	•	16-68			1.29-1.59		0.10-0.16		
	•	16-76			1.64-1.98		0.06-0.12		
	29-60	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
741150	<u> </u>	' ' 						; ;	
Lackawanna,	i	i i				i i		i i	
extremely stony	0-2	0-68	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	2-3	53-68	17-44	2-17	1.30-1.52	0.6-2.0	0.10-0.16	0.0-0.1	3.0-6.0
	3-7	53-68	17-44	2-17	1.29-1.42	0.6-2.0	0.10-0.16	0.0-0.1	0.0-2.0
	7-8	53-68	17-44	2-17	1.29-1.59	0.6-2.0	0.10-0.16	0.0-0.1	2.0-6.0
	8-16	16-68	17-65	2-18	1.29-1.59	0.6-2.0	0.10-0.16	0.0-0.1	0.0-2.0
	16-24	16-68	17-65	2-18	1.29-1.59	0.6-2.0	0.10-0.16	0.0-0.1	0.0-2.0
	24-29	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
	29-60	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
001114	!	!!		. !		!!!		!!!	
801114 Oquaga	1 0 1		0 50		0 12 0 22	I	0 25 0 45	1 0 0 0 0 1	70 100
Oquaga	0-1 1-4	0-47			0.13-0.23 1.30-1.52	5.9-20.0 0.6-2.0	0.35-0.45 0.08-0.17		70-100 2.0-8.0
	1 4-20		17-65		1.29-1.59		0.08-0.17		
	120-25		15-65		1.29-1.70	1 0.6-2.0 1	0.04-0.12		0.0-2.0
	125-80	10 /0 							
		i i	i			i i		i i	
810906	ĺ	i i	i	İ		i i		i i	
Oquaga	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-4	35-47	35-50	10-18	1.30-1.52	0.6-2.0	0.08-0.17	0.0-0.1	2.0-8.0
	4-20	16-68	17-65	2-18	1.29-1.59	0.6-2.0	0.04-0.12	0.0-0.1	0.0-2.0
	20-25	16-76	15-65	2-18	1.29-1.70	0.6-2.0	0.04-0.12	0.0-0.1	0.0-1.0
	25-80					! !		! !	
1147465		 						!!!	
Alden,	 	, , , ,						: :	
extremely stony	1 0-2	0-30	0-55	0-221	0.13-0.23	5.9-20.0	0.35-0.45	'	70-100
002002, 0.003	2-7				1.34-1.54		0.16-0.22		
	7-14		26-59		1.29-1.62			0.0-0.1	
	14-28		26-59		1.29-1.62		0.14-0.20	0.0-0.1	
	28-43	5-71	26-59	2-35	1.29-1.62	0.2-0.6	0.14-0.20	0.0-0.1	0.0-0.5
	43-60	5-68	17-59	8-35	1.29-1.62	0.1-0.6	0.08-0.15	0.0-0.1	0.0-0.5
	I		I			1		! !	
1147467	I	! !	!			[
Arnot,	1 0 1	I 1	0 50	0 10	0 12 0 00		0 25 0 45	1 0 0 0 0 1	70 100
very rocky	•				0.13-0.23			0.0-0.0	
					1.30-1.42 1.29-1.42			0.0-0.2 0.0-0.1	
	•				1.29-1.42			0.0-0.1 0.0-0.1	
					1.29-1.59			0.0-0.1	
					1.29-1.59			0.0-0.1	
	•	10-4/ 				0.6-5.9 	0.08-0.12	0.0-0.1 	
		: :				; ;		; ;	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth		Silt	Clay	Moist bulk density	 Permeability (Ksat) 	Available water capacity	 Shrink- swell potential 	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
1147467	!		!	!		! !		!!!	
Lordstown, very rocky	 0-1	l 0-471	0-50 I	0_101	0.13-0.23	 5.9-20.0	0.35-0.45	I	70-100
rocky					1.30-1.52		0.35-0.45		
	•	53 1 7 53 - 68			1.29-1.42		0.10-0.16		
	3-5	16-47	35-65 i		1.29-1.59		0.10-0.16		
	5-17	21-47	35-65	10-18	1.29-1.59	0.6-2.0	0.10-0.16	0.0-0.1	0.5-1.0
					1.29-1.59		0.10-0.16		
	22-36			2-18	1.29-1.70	0.6-2.0	0.05-0.14	0.0-0.1	0.0-0.5
	36-80		!						
1147468	1	 							
Arnot	0-1	ı 0-471	0-501	0-18	0.13-0.23	'	0.35-0.45	'	70-100
	1-2	35-47			1.30-1.42		0.10-0.15		
	2-3	53-68	17-44	2-17	1.29-1.42	0.6-5.9	0.08-0.12	0.0-0.1	0.0-0.5
		53-68			1.29-1.59		0.08-0.12		
					1.29-1.59		0.08-0.12		
				10-18	1.29-1.59	0.6-5.9	0.08-0.12		0.0-0.5
	17-80		!	!					
Lordstown	0-1	ı ı 1 0-471	0-501	0-181	0.13-0.23		0.35-0.45	I 0.0-0.0 I	70-100
	•				1.30-1.52		0.11-0.17		
					1.29-1.42		0.10-0.16		
	3-5	16-47	35-65	10-18	1.29-1.59	0.6-2.0	0.10-0.16	0.0-0.1	0.5-1.0
					1.29-1.59		0.10-0.16		
					1.29-1.59		0.10-0.16		
	122-36			2-18	1.29-1.70	0.6-2.0 	0.05-0.14		
	36-80 	 							
1147469	i	' ' 	i	· ·		; 		i i	
Arnot	0-1	0-47	0-50 j	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2	35-47	35-50	10-18	1.30-1.42	0.6-5.9	0.10-0.15	0.0-0.2	3.0-6.0
	2-3	53-68	17-44	2-17	1.29-1.42	0.6-5.9	0.08-0.12	0.0-0.1	0.0-0.5
		53-68			1.29-1.59		0.08-0.12		
					1.29-1.59		0.08-0.12		
	117-80		35-65 	10-18	1.29-1.59	0.6-5.9 	0.08-0.12	0.0-0.1 	0.0-0.5
	1 / - 80	 				, , , ,		, , , ,	
Lordstown	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-2	35-47	35-50	10-18	1.30-1.52	0.6-2.0	0.11-0.17	0.0-0.2	3.0-8.0
	2-3	53-68	17-44	2-17	1.29-1.42	0.6-2.0	0.10-0.16	0.0-0.1	0.5-1.0
	•				1.29-1.59		0.10-0.16		
	*				1.29-1.59	•	0.10-0.16		
					1.29-1.59 1.29-1.70		0.10-0.16 0.05-0.14		
	136-80		I			0.6-2.0 	0.05-0.14	0.0-0.1 	
	1	i i	i	i		i i		i i	
1147470	İ	İ	i	i		i i		i i	
Atherton, very	1		- 1	- 1		l l		l I	
poorly drained-		0-30			0.13-0.23		0.45-0.55		
	•	0-30			0.13-0.23		0.45-0.55		
	•		50-55 17-59		1.34-1.54 1.34-1.54		0.16-0.21 0.10-0.19		
	8-10 10-18		17-59		1.54-1.54		0.10-0.19		
	118-29		17-59		1.56-1.73		0.10-0.19		
	29-32		17-59		1.56-1.73		0.10-0.19		
	32-41		17-59		1.56-1.73	0.2-2.0	0.10-0.19		
	41-45		17-59		1.42-1.70		0.05-0.12		
	45-50		17-59		1.42-1.70		0.05-0.12		
	50-60	5-71	17-59	2-35	1.42-1.70	0.6-5.9	0.05-0.12	0.0-0.1	0.0-1.0
	60-70		17-59	2 25.	1.42-1.70	0.6-5.9	0.05-0.12		0.0-1.0

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential 	Organic matter
	'	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
1147470	I	l I	1			l I		l I	
Atherton,			00.40				0.16.0.01		4 0 10
poorly drained-	0-6 6-12		39-49 17-59		1.10-1.40 1.25-1.55	0.2-2.0 0.2-2.0	0.16-0.21 0.10-0.19		4.0-10 0.0-2.0
	112-30		17-59		1.25-1.55			0.0-0.1 0.0-0.1	
	30-40		10-59		1.45-1.65			0.0-0.1	0.0-1.0
	40-60	5-76	10-59	2-35	1.45-1.65	0.6-5.9	0.05-0.12	0.0-0.1	0.0-1.0
1147471	1	! !	ļ			!!!		!!	
1147471 Catden	I I 0-2	ı ı 1 0-301	0-55 l	 0-22	0.13-0.23		0 35-0 45	I 0.0-0.0 I	70-100
Cataen	2-13				0.13-0.23		0.35-0.45		
	13-20	0-30	0-55		0.13-0.23		0.35-0.45	0.0-0.0	70-100
	20-32				0.13-0.23			0.0-0.0	
	32-60	0-30	0-55	0-22	0.13-0.23	0.2-5.9	0.35-0.45	0.0-0.0	70-100
1147474	<u> </u>	, , , ,						; ;	
Chippewa,	I	ıi	i	ı i		ı i		ı i	
extremely stony	•	0-30			0.13-0.23			0.0-0.0	70-100
	2-4				1.03-1.54		0.18-0.22		2.0-4.0
	4-8 8-13				1.16-1.50 1.16-1.62			0.0-0.1 0.0-0.1	0.3-0.5 0.3-0.5
	113-21		17-59		1.71-1.98			0.0-0.1 0.0-0.1	0.2-0.4
	21-29		17-59		1.71-1.98			0.0-0.1	
	29-34	5-68	17-59	8-35	1.42-1.98	0.0-0.2	0.01-0.02	0.0-0.1	0.1-0.3
	34-60	5-68	17-59	8-35	1.42-1.98	0.0-0.2	0.01-0.02	0.0-0.1	0.1-0.3
1147475	<u> </u>	 				! ! ! !		: :	
Colonie	0-2		21-24	0-1	1.24-1.45	2.0-20.0	0.09-0.10	0.0-0.1	1.0-2.0
	2-11		21-24		1.24-1.45	2.0-20.0		0.0-0.1	1.0-2.0
	11-24	76-98			1.29-1.51			0.0-0.1	0.0-0.5
	24-40 40-62	76-98 76-98			1.29-1.51 1.29-1.51	2.0-20.0 2.0-20.0	0.06-0.08	0.0-0.1	0.0-0.5 0.0-0.5
	40 02	70 30 	2 2 3 1		1.23 1.31	2.0 20.0 	0.00 0.00	0.0 0.1 	0.0 0.5
1147478	I	l I	1			I I		l I	
Delaware,							0 05 0 45		TO 100
rarely flooded-	U-1 1-4	0-73 53-73	0-44 17-44		0.13-0.23 1.24-1.52			0.0-0.0 0.0-0.2	70-100 2.0-4.5
	4-11		17-44		1.24-1.52		0.15-0.21		
	*		17-44		1.29-1.42		0.07-0.20		
	20-33		17-44		1.29-1.42			0.0-0.1	0.0-0.5
	•		17-44		1.29-1.42			0.0-0.1	
	41-56	35-85 35-85	12-49		1.29-1.42 1.29-1.42			0.0-0.1 0.0-0.1	0.0-0.5 0.0-0.5
	50-60	35-65	12-49	Z-1/ 	1.29-1.42	5.9-20.0 	0.05-0.15	0.0-0.1 	0.0-0.5
1147482	İ	i i	i	i i		i i		i i	
Fredon, very								! !	
stony		0-32			0.13-0.23			0.0-0.0	
					1.34-1.54 1.42-1.59			0.0-0.1 0.0-0.1	
	•	16 71 16-71			1.42-1.59			0.0-0.1	
		16-71			1.42-1.59			0.0-0.1	
		82-98			0.67-1.58			0.0-0.1	
	•	82-98			0.67-1.58			0.0-0.1	
		82-98 82-98			0.67-1.58 0.67-1.58			0.0-0.1 0.0-0.1	
		82-98 82-98			0.67-1.58			0.0-0.1 0.0-0.1	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand Sand 	Silt	Clay	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
		 <i>Pct</i>	Pct	Pct	g/cc	. 	In/in	 Pct	Pct
1147482	i	i i	i	i	3,	i í	•	i i	
Halsey, very	I	l I	1	I		1		1 1	
stony	0-1	0-32	0-65	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-5	16-32	51-65	13-18	1.34-1.54	0.6-5.9	0.14-0.24	0.0-0.1	3.0-5.0
					1.34-1.54			0.0-0.1	
	•	16-71		- •	1.42-1.59			0.0-0.1	
		82-98	- '		0.67-1.58			0.0-0.1	
		82-98	- '		0.67-1.58			0.0-0.1	
	•	82-98			0.67-1.58			0.0-0.1 0.0-0.1	
		82-98 82-98			0.67-1.58 0.67-1.58	5.9-20.0		0.0-0.1	0.0-0.5 0.0-0.5
	1	02 JU 	2 13		0.07 1.50	1 3.3 20.0 1	0.02 0.07	1 0.0 0.1 1	0.0 0.5
1147485	i	i i	i	i		i i		i i	
Hazen,	i	i i	Ì	i		i i		i i	
very stony	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	1-10	35-47	35-50	10-18	1.30-1.52	0.6-5.9	0.12-0.18	0.0-0.2	1.8-5.2
	10-18	61-76	15-26	5-14	1.50-1.57	0.6-5.9	0.10-0.14	0.0-0.1	0.2-1.0
	•	82-98			0.67-1.58			0.0-0.1	
	•	82-98			0.67-1.58			0.0-0.1	0.0-0.5
	41-60	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.02-0.08	0.0-0.1	0.0-0.5
Hoosic, very	1								
stony	 0-1	ı ı 1 0-471	0-50		0.13-0.23		0 35-0 45	1 0.0-0.0 1	70-100
Scory	1 1-9		35-50		1.30-1.52			0.0-0.2	1.8-5.2
	•	. 35-761			1.45-1.57			0.0-0.1	
	21-27	82-981	2-13		0.67-1.58			1 0.0-0.1	
	27-37	82-98	2-13		0.67-1.58		0.01-0.05	0.0-0.1	
	37-49	82-98	2-13	0-7	0.67-1.58	20.0-99.9	0.01-0.05	0.0-0.1	0.0-0.5
	49-60	82-98	2-13	0-7	0.67-1.58	20.0-99.9	0.01-0.05	0.0-0.1	0.0-0.5
1147400	1	! !	ļ	. !		!!!		!!!	
1147490	1	! ! ! !		. !				! !	
Hoosic, very stony	 0-1	ı ı 0-47	0-50		0.13-0.23		0 35-0 45	1 0.0-0.0 1	70-100
s cony	0-1 1-9				1.30-1.52			1 0.0-0.0 1	1.8-5.2
		35 1 7 35-76			1.45-1.57			0.0-0.1	
	•	82-98			0.67-1.58			0.0-0.1	
	27-37	82-98	2-13		0.67-1.58		0.01-0.05	0.0-0.1	
	37-49	82-98	2-13	0-7	0.67-1.58	20.0-99.9	0.01-0.05	0.0-0.1	0.0-0.5
	49-60	82-98	2-13	0-7	0.67-1.58	20.0-99.9	0.01-0.05	0.0-0.1	0.0-0.5
	!	! !		. !		!!!		!!!	
Hazen,	I I 0 1		0 50	 0 10	0 12 0 22	I	0 25 0 45	I 0.0-0.0 I	70 100
very stony	0-1 1-10	0-47			0.13-0.23 1.30-1.52	5.9-20.0 0.6-5.9	0.12-0.18		70-100 1.8-5.2
	•	33-47 61-76			1.50-1.57			0.0-0.2	
		82-98			0.67-1.58			0.0-0.1	
		82-98			0.67-1.58			0.0-0.1	
		82-98			0.67-1.58			0.0-0.1	
	İ	i i	i	İ		i i		i i	
1147491	I	l I	1	l I		1		1 1	
Hoosic, very	1					<u> </u>			
stony		0-47			0.13-0.23			0.0-0.0	
	•				1.30-1.52			0.0-0.2	
		35-76			1.45-1.57			0.0-0.1	
		82-98			0.67-1.58 0.67-1.58			0.0-0.1	
		82-98 82-98			0.67-1.58			0.0-0.1 0.0-0.1	
		82-98 82-98			0.67-1.58			0.0-0.1	
		02 JU 			3.0. 1.00		0.00	!	5.5 5.5

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt	Clay	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
1147491	1	!!!				!!!		!	
Otisville, very stony	•	ı ı 0-76	0-26	I 0-14 I	0.13-0.23	5.9-20.0	0.35-0.45	I I	 70-100
Scory	•	61-76			1.24-1.68		0.09-0.12	•	
		82-98			0.67-1.58	5.9-20.0	0.09-0.12		
	7-11	82-98	2-13	0-7	0.67-1.58	5.9-20.0	0.09-0.12	0.0-0.1	0.0-0.5
		82-98			0.67-1.58	5.9-20.0	0.02-0.05	•	
		82-98			0.67-1.58		0.01-0.02		
		82-98 82-98			0.67-1.58 0.67-1.58	5.9-99.9	0.01-0.02 0.01-0.02		0.0-0.5
	43-60 	02-30 	2-13	U-7 	0.67-1.56	5.9-99.9 	0.01-0.02	0.0-0.1 	0.0-0.5
1147492	i	i i		i		i i		i	İ
Lackawanna,	I	1 1				I I		l I	l
extremely stony		0-68			0.13-0.23	5.9-20.0	0.35-0.45		70-100
		53-68			1.30-1.52		0.10-0.16	•	
	•	53-68			1.29-1.42		0.10-0.16		
	•	53-68 16-68			1.29-1.59 1.29-1.59		0.10-0.16 0.10-0.16	•	
	•	16-68			1.29-1.59		0.10-0.16		
		16-76			1.64-1.98		0.06-0.12	0.0-0.1	
	29-60	16-76	15-65	2-18	1.64-1.98	0.1-0.2	0.06-0.12	0.0-0.1	0.0-0.5
4448500	1	!!!				!!!		!	
1147500 Wurtsboro,	1					! !			
extremely stony	1 0-2	0-47	0-50	I 0-18	0.13-0.23	5.9-20.0	0.35-0.45	I 0.0-0.0	70-100
00_00_, 0.00,					1.24-1.68		0.10-0.16		
	3-5	35-68	17-50	2-18	1.29-1.42	0.6-5.9	0.10-0.16	0.0-0.1	0.0-1.0
		35-68			1.29-1.42		0.10-0.16		
		35-76			1.29-1.70		0.10-0.14	•	
		35-76 35-76			1.29-1.70	0.6-5.9 0.1-0.2	0.10-0.14 0.08-0.12		
		35-76 35-76			1.64-1.98 1.64-1.98	0.1-0.2	0.08-0.12	•	
1147501	 	 				! ! ! !		 	
Wurtsboro, extremely stony	I 0-2	I 0-681	0-44	 0_17	0.13-0.23		0.35-0.45	I I 0 0-0 0 I	 70-100
extremely stony	1 2-3		17-44		1.24-1.68	0.6-5.9	0.33-0.43	•	
	•	35-68			1.29-1.42		0.10-0.16	•	
	4-6	35-68	17-50	2-18	1.29-1.42	0.6-5.9	0.10-0.16	0.0-0.1	0.5-2.0
		35-76			1.29-1.70		0.10-0.14		
		35-76			1.29-1.70	0.6-5.9	0.10-0.14	•	
		35-76 35-76			1.64-1.98 1.64-1.98	0.1-0.2 0.1-0.2	0.08-0.12 0.08-0.12		
	1	33 /0 	13 30	2 10	1.01 1.50	0.2 0.2	0.00 0.12	l 0.0 0.1	1
Swartswood,	I	1 1				I I		l I	l
extremely stony		0-47			0.13-0.23		0.35-0.45		
					1.29-1.52		0.08-0.12		
	•	53-76 53-76			1.29-1.51 1.29-1.51		0.08-0.12 0.08-0.12	•	
	•	35-76 35-76			1.29-1.70		0.08-0.12	•	
	•	35-761			1.64-1.98		0.06-0.10		
	•	35-76			1.64-1.98		0.06-0.10	•	
1147500	1	! !				! !			
1147502 Wurtsboro,	1	, I]]
extremely stony	0-2	ı 0-68	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
		53-68			1.24-1.68		0.10-0.16		
		35-68			1.29-1.42		0.10-0.16		
		35-68			1.29-1.42		0.10-0.16		
	•	35-76			1.29-1.70		0.10-0.14		
	•	35-76 35-76			1.29-1.70 1.64-1.98		0.10-0.14 0.08-0.12	•	
	•	35-76 35-76			1.64-1.98		0.08-0.12		
		1 33 701		1 2 20		· · · - · - · - !			

Table 15.--Physical Soil Properties--Continued

						1 '			
Map unit symbol and soil name	 Depth 		Silt	Clay	bulk	 Permeability (Ksat)	Available water	Shrink- Shrink- swell	Organic matter
	! !	 			density	1 1	capacity	potential	
	In	' Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
1147502	I	l I				1 1		1 1	
Swartswood,			0.50				0 05 0 45		
extremely stony		0-47 35-47			0.13-0.23 1.29-1.52			0.0-0.0 0.0-0.2	
	•	53-47 53-76			1.29-1.52			0.0-0.2	
	•	. 53-76			1.29-1.51			0.0-0.1	
	4-21	35-76	15-50	2-18	1.29-1.70	0.6-5.9	0.08-0.12	0.0-0.1	0.0-1.0
	•	35-76			1.64-1.98			0.0-0.1	
	32-60	35-76	15-50	8-18	1.64-1.98	0.1-0.6	0.06-0.10	0.0-0.1	0.0-0.5
1147527								!	
Udorthents	I I 0-12	I 35-47I	35-50	 10-18	 1.30-1.52	0.1-0.2	0.00-0.00	1 0 0-0 2 1	2.0-4.0
	112-72				0.67-1.58	0.2-20.0	0.08-0.19		0.5-1.0
	i	i i				i i		i	
1147532	I	l I			1	1		1 1	
Udorthents	•				1.30-1.52	0.1-0.2	0.00-0.00		2.0-4.0
	12-72	35-98	2-50	0-18	0.67-1.58	0.2-20.0	0.08-0.19	0.0-0.1	0.5-1.0
1147533								!	
Wurtsboro,	! !	 				1 1			
extremely stony	0-2	I 0-681	0-44	0-17	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
		53-68			1.24-1.68		0.10-0.16	0.0-0.2	
	3-4	35-68	17-50	2-18	1.29-1.42	0.6-5.9	0.10-0.16	0.0-0.1	0.0-1.0
	•	35-68			1.29-1.42			0.0-0.1	
	•	35-76			1.29-1.70			0.0-0.1	
	•	35-76			1.29-1.70			0.0-0.1	
	•	35-76 35-76			1.64-1.98 1.64-1.98	0.1-0.2 0.1-0.2		0.0-0.1 0.0-0.1	
	1	33 /0 	13 30	2 10	1.04 1.50	1 0.1 0.2 1	0.00 0.12	1 0.0 0.1	0.0 0.5
Swartswood,	i	i i				i i		i i	
extremely stony	0-1	0-47	0-50	0-18	0.13-0.23	5.9-20.0	0.35-0.45	0.0-0.0	70-100
	•	35-47			1.29-1.52			0.0-0.2	
	2-3		15-44		1.29-1.51			0.0-0.1	
	•	53-76			1.29-1.51			0.0-0.1	
	•	35-76 35-76			1.29-1.70 1.64-1.98		0.08-0.12	0.0-0.1 0.0-0.1	
	132-60		15-50		1.64-1.98		0.06-0.10		
		,				i		i i	
1948749	I	l I			1	1		1 1	
Arnot	1 0-8	31	56		1.10-1.40	0.6-2.0	0.10-0.15		3.0-6.0
	8-16	31	56		1.20-1.50	0.6-2.0	0.08-0.12		0.1-3.0
	16-26					0.2-2.0	0.00-0.00		
1948750	! 	' '				! ! !			
Arnot	0-8	' 31	56	8-18	1.10-1.40	0.6-2.0	0.10-0.15	0.0-2.9	3.0-6.0
	8-16	31	56	8-18	1.20-1.50	0.6-2.0	0.08-0.12	0.0-2.9	0.1-3.0
	16-26					0.2-2.0	0.00-0.00		
	I	l I				1		1 1	
1948751	1						0 10 0 15		
	0-8 8-16	31 31	56 56		1.10-1.40 1.20-1.50			0.0-2.9 0.0-2.9	
	116-26	JI 				0.02.0	0.00-0.00		
	i	i i				i i		i i	
1948774	I	ıi	i	İ		ı i		ı	
Conotton		43	38		1.30-1.50			0.0-2.9	
	9-45		37		1.25-1.60			0.0-2.9	
	45-80	84	11	2-9	1.20-1.50	6.0-20.0	0.02-0.06	0.0-2.9	0.1-0.5
1948775	I	, I] 			1	
Conotton	I 0-9	ı 1 1 42 1	38	8-25	 1.30-1.50	2.0-6.0	0.10-0 14	 0.0-2.9	0.5-3.0
	9-45		38		1.25-1.60			0.0-2.9	
	45-80		11		1.20-1.50			0.0-2.9	
	I	l I			l	1 1		1 1	

Table 15.--Physical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Sand 	Silt 	Clay 	Moist bulk density	Permeability (Ksat) 	Available water capacity	Shrink- swell potential	Organic matter
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct
L948776	1								
Conotton	•	42	38		1.30-1.50	2.0-6.0		0.0-2.9	
	9-45	40	38	6-25 2-9	1.25-1.60	6.0-20.0		0.0-2.9	0.5-1.0
	45-80	84	11	2-9	1.20-1.50	6.0-20.0	0.02-0.06	0.0-2.9	0.1-0.5
L948777	i	<u> </u>	! 			; ;		; ;	
	0-9	42	I 38	I 8-251	1.30-1.50	2.0-6.0	0.10-0.14	0.0-2.9	0.5-3.0
	9-45	40	38		1.25-1.60	6.0-20.0	0.06-0.10		
	45-80	84	11	2-9	1.20-1.50	6.0-20.0	0.02-0.06	0.0-2.9	0.1-0.5
	I	I	l			1		1 1	
L948797	1	I	l			1		1 1	
	1 0-8	32	56		1.10-1.40	0.6-2.0		0.0-2.9	1.0-5.0
	8-24	32	56		1.20-1.50	0.6-2.0	0.08-0.12		0.0-1.0
	24-32	32	56		1.70-1.95	0.6-2.0	0.03-0.09		0.0-0.0
	32-40					0.2-2.0	0.00-0.00	! !	
1948802	1	1	 					: :	
	I 0-8	ı I 32	ı I 56	ı 6–181	1.10-1.40	0.6-2.0	0.10-0.18	1 0 0-2 9 1	1.0-5.0
	8-24	1 32	1 56		1.20-1.50	0.6-2.0	0.08-0.12		
	124-32	1 32	I 56		1.70-1.95	1 0.6-2.0 1	0.03-0.09		0.0-0.0
	132-40			,		0.2-2.0	0.00-0.00		
	i	i	I	i i		i i		i i	
L948818	I	I	l	I I		1		1 1	
	l 0-8	32	56		1.10-1.40	0.6-2.0		0.0-2.9	
	8-24	32	56		1.20-1.50	0.6-2.0	0.08-0.12		0.0-1.0
	24-32	32	56		1.70-1.95	0.6-2.0	0.03-0.09		0.0-0.0
	32-40					0.2-2.0	0.00-0.00	! !	
1948832	1	1	 			! !		!!!	
Penargyl	I I 0-12	1 26	ı I 54	I 15-25I	1.20-1.50	0.6-2.0	0.10-0.14	1 0 0-2 9 1	1.0-3.0
	12-74	•	I 55		1.20-1.50	0.6-2.0		1 0.0-2.9	
	174-80	1 38	ı 36	18-32		0.2-6.0	0.08-0.11		0.0-0.5
	80-90					0.6-2.0		i i	
	1	I	I			1		1 1	
L948846	1	I	l			1		1 1	
•	0-10	27	54		1.10-1.40	0.6-2.0		0.0-2.9	
	10-22	38	36		1.25-1.55	0.6-2.0	0.08-0.13		
	22-30	34	38		1.25-1.55	0.6-2.0	0.09-0.18		
	30-79	92	5	1-5	1.45-1.65	2.0-20.0	0.01-0.04	0.0-2.9	0.0-0.5
1948855	1 1	! !	I I	 		1 1 1			
Udorthents,	i	i	' 	' '				; ;	
· ·	0-5	42	ı I 38	5-35	1.20-1.80	0.1-20.0	0.06-0.15	1 0.0-2.9	0.0-5.0
-	5-40		38		1.20-1.80			0.0-2.9	
	40-70		38		1.30-1.90			0.0-2.9	
	I	I	I	ı i		ı i		ı i	
L948989	I	I	l	I I		1 1		1 1	
Delaware			45		1.15-1.40			0.0-2.9	
	10-40		34		1.15-1.45			0.0-2.9	
	40-87	79	16	2-7	1.25-1.55	6.0-20.0	0.04-0.10	0.0-2.9	0.0-0.5
	1	1	l	i 1		1 1		1 1	

Table 16.--Erosion Properties

[Entries under "Erosion factors" apply to the entire profile.

Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer]

Mana amaida asambada l			ion fac		Wind	
Map unit symbol	Depth	!			erodi-	
and soil name		 Kw	•	l I T	bility group	
	———	¦	¦	¦	¦	¦
290836 I		i i	i	i	i	i
Hoosic, very stony		•	•] 3	6	48
!		.10	•	!	!	!
ļ	9-21 21-27	.05	•	•	1	
<u>'</u>	27-37		•	•		! !
i	37-49	•		:	i	i
į	49-60	.02	.05	ĺ	İ	İ
 Otisville, very stony	0-1	 	•	l I 5	l I 5	l I 56
		.05	•		1	1
i		.05	•	•	i	i
I	7-11	.05	.10	I	I	I
I	11-19			l	1	I
I	19-31		•	:	!	!
	31-43		•	:	!	!
¦	43-60	I .05	.05 	 	! !	
296265		i	i	į	į	İ
Alden		.37	•		1 8	0
ļ	9-35 35-60	.37	•	ļ	1	
i i	35-60	.20 	.32 	I 	<u> </u>	!
296269		l	ĺ	ĺ	İ	İ
Fluvents, (alluvial			1	! -	1	
land)		.43 .37] 3	86
i	42-60		•	! 	i	!
296271				 	1	1
Alvira	0-10	I I.24	ı I.32	ı I 3	I 8	I I 0
AIVII I	10-21	•	•	, J	i	ı
i	21-60			•	i	i
 Watson	0-10	l I.28	l I .37	l I 3	l I 8	I I 0
	10-27				i	i
i	27-60		•	•	İ	İ
296272 I		 	 	 	1	
Bath	0-8	.24	.32	3	 5	, 56
I		.24	•	l	1	I
I	27-60		•	ļ	!	ļ .
 	60-64	.24 	.32 	 	I I	
296273		İ	İ	İ	i	i
Bath		.24	•		5	56
ļ.		.24		!	!	!
l	27-60 60-64	•	•	 	I	I I
 	00-04	.24 	, .32 	! 		'
296274					ļ _	l
Bath		.24	•		5	56
l I	8-27 27-60	.24		 	1	I I
ı			•	:	1	1
1	60-64					

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth		ion fa		Wind erodi-	
and soil name	рерсп	¦			bility	
		Kw	•	ΙT	group	_
296275	In	i	<u> </u>	¦	<u> </u>	¦
Bath	0-8	I I.24	ı I.32	ı I 3	I 8	I I 0
		.24	•	İ	i	j
I	27-60	.24	•	I	I	l
<u> </u>	60-64	.24		 	1	
296276			i	i	į .	
Bath	0-8	.24 .24	•] 3	8	0
		.24 .24		 	 	l I
i	60-64	– -		İ	i	i
296277		 	 	 	 	
Benson			•	2	6	48
!		•	•	l	1	l
l İ	18-22	 	 	 	 	
296278 Benson	0-8	l I .20	l I .28	l I 2	l I 6	l I 48
1	8-18		•	 i	İ	, <u>1</u> 0
į	18-22			İ	į	İ
Rock outcrop.		 	 	 	! 	
296279						
Benson	0-8 8-18	.20 . 17	.28 .24	2 	6 	48
i	18-22	•	•	İ	i	i
Rock outcrop.		 	 -	 	 	
296280		 	 	 	 	l I
Braceville		.20	•		5	56
!		.20 .20	•	!		
i İ	30-55 55-60	•	•	 	 	
296281 I		 	l I	 	I I	
Braceville		.20	•	•	5	, 56
!		.20	•		!	
	30-55 55-60	.20 .20	•	 	 	l I
296283		l I	 	l I	 	
Buchanan		.24			8	0
!		.24			1	l
l İ	25-60			 	 	
296288 Chippewa	0-8	l .32	 28	l I 3	l I 8	l I 0
Chippewa		.32		1 3	İ	, ŭ
i					i	
I	48-80	.24	.32		 	
Norwich		.32	.32	3	8	0
!					:	 -
· ·	16-48 48-80				! 	l I
i				İ	i	i

Table 16.--Erosion Properties--Continued

	Depth				Wind erodi-	erodi-
and soil name		 Kw 	Kf	T	bility group 	index
	In	¦	¦	¦	<u>'</u>	<u> </u>
296289 Chippewa 		.24	. 37 .32 .32	 	 8 	 0
Norwich 		.24 .24 .24	32 .28 .32	I I	 8 	 0
296295 Udorthents, cut and fill.		 	 	 	 	
296297 Dekalb 			.24 .24	•	 8 	 0
296298 Dekalb		i	.24 .24 	•	 8 	 0
296303 Hazleton	0-5	.15 .15 .15	.20 .20	•	 8 	 0 0
296304 Holly			.32 .32	i I I	 8 	 0 1
296311 Lackawanna 		.24 .20	.28	İ	 6 	 48
Bath 		.24	.28 .28	l I	 8 	 0
296312 Lackawanna	0-8	 .24 .20	 .32 .28		 6 	 48
296313 Lackawanna		.24 .20 .20	.28	ĺ	 6 	 48
296315 Lackawanna 		.24 .20 .20	.32 .28 .24	ĺ	6 	48

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth		ion fa	ctors	Wind erodi-	
and soil name	 	 Kw	:	 T 	:	bility index
296316 Lackawanna		 .24 .20	 .32 .28	 3 	 6 	
296317 Laidig		.24	•	•	 8 8	 0
296326 Lordstown	•	•	.28	 3 	 8 1 	
296327 Lordstown	•	•	.28	 3 1 	 8 	
296328 Lordstown	0-7 7-26 26-30 30-42	.28	.32	•	 8 	 0
Oquaga	0-7 7-30 30-42			 3 	 8 	 0
296329 Mardin		.24	.28 .28 .32	 	 5 	 56
296330 Mardin		.24	.28 .28 .32	 	 5 1 	 56
296331 Mardin		.24	37 .37 .64	İ	 8 	
296332 Mardin	0-8	. 24 .24 .24 .24	.37 .37 .64	 	 8 	 0

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			erodi-	erodi-
and soil name 		 Kw	 Kf	 T	bility group	
296335	In	¦ 	' 	' 	' 	
Meckesville 		.24	.28	4 	6 	48
296337 Meckesville	0-9 9-36 36-60 60-64	•	.28	4 	8 	 0
296338 Morris	8-17	 .28 .24 .24 .24	.49 .49	 3 	 5 	 56
296339 Morris 	8-17	 .24 .24 .24 .24	.32	 3 	 8 	 0 1
296340 Morris 	8-17	 .24 .24 .24 .24	.32	 3 	 8 	
296341 Freetown, mucky peat	0-6 6-72	 .05 .05	•	 3 	 8 	
296342 Paupack, mucky peat (shallow)			.05 .24	 2 	 8 	 0 1
296343 Oquaga 	0-7 7-30 30-42			 3 	 6 	 48
 Lackawanna 		 .28 .20 .20	.24	İ	 6 	 48
296344 Oquaga 	0-7 7-30 30-42	.28 .20	.37 .32 	l I	 6 	 48
 Lackawanna 	0-8 8-25 25-60		.32 .24 .24	i I	 6 	 48
296346 Oquaga	7-30 30-42	•	.37 .28 	 3 		

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name 		 Kw	•	 T 	:	bility index
296346 Lackawanna 		 .24 .20	 .32 .28	 3 	 7 	 38
 296347 Oquaga 	0-7 7-30 30-42	.20	•	 3 	 8 	
 Lackawanna 	0-8 8-25 25-60	 .24 .20 .20	•	 3 	 7 	 38
296348 Philo	0-10 10-40 40-60	. 32	. 32	 5 	 5 1	 56
296349 Pope 	0-10 10-30 30-60	.28	•	 5 	 5 1	 56
296350 Pope	0-10 10-30 30-60	.28	.28	 5 	 5 	 56
296351 Rexford, somewhat poorly drained 	0-8 8-18 18-40 40-63	.20	.32 .32	 3 	 8 	 0
 Rexford, poorly drained 			.28 .32 .32		 8 	 0
296355 Sheffield 	0-7 7-19 19-38 38-66	.37 .37		 4 	 8 	
296363 Dystrochrepts, very stony	0-6 6-32 32-56 56-60	.15	.24 .24	 3 	 8 	
296369 Wayland 	0-9 9-41 41-60	•	.43	İ	 8 	 0

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth		ion fa	ctors	Wind erodi-	
and soil name		 Kw	 Kf	l I T	bility group	-
		¦	¦	¦	¦	¦
296376 Wellsboro	8-17	.28 .28 .28	.43 .43 .32	 3 	 6 	 48
296379 Wellsboro	8-17		. 43 .43 .32	 3 	 8 	 0
296385		i	 	! 	i	İ
Wyoming 	0-7 7-25 25-60		.24	3 	6 	48
296386 Wyoming		.17	.24	 3 	6 	 48
296387 Wyoming		•	.24	 3 	 6 	 48
296388 Wyoming		. 17	 .20 .24	 3 	 6 	 48
296389 Wyoming	0-8 8-26 26-60	1.17	.24	 3 	 6 	
296390 Water.		 	 	 	 	
297185 Edgemere 	2-5	 .10 .20 .24 .24	.43	 3 	 8 	 0
Shohola		.20 .24 .24	. 37	•	8 	 0
297186 Edgemere 	0-2 2-5	. 10 .20 .24	.43	l I	 8 	 0 1
297188 Manlius 	0-5 5-24 24-30 30-40	.20 .20 .20 .20	.32 .28 .32	i I	 8 	 0

Table 16.--Erosion Properties--Continued

	Depth				erodi-	erodi-
and soil name 		 Kw 	Kf	 T 	bility group 	index
207100	In	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
297188 Arnot 		 .24 .17 	.24	•	 8 	 0
Rock outcrop.		 	 	 	 	
297189 Manlius 		i	.28 .32 	 	 8 	 0
Arnot 		.24 .17	.28 .24	•	 8 	 0
Rock outcrop.		! !	 	! 	! 	!
297190 Braceville 	0-11 11-27 27-48 48-70	.28	.43 .43	i I	 3 	 86
297191 Wyalusing 		 .37 .28 .10	.32	•	 8 8	 0 0
297192 Pope 		. 28 .28 .28 .28	.28	i	 3 	 86
297193 Paupack		.05 .05 .10	.05 .24	i I	 8 	 0
297196 Freetown	0-6 6-72	 .05 .05	•	 3 	 8 	 0
297197 Manlius			.28 .32	I	 8 	 0 1
297198 Manlius 			.28	 2 1 	 8 	 0 1
297201 Oquaga 	0-2 2-26 26-32 32-42	.20 .20 .20 .20	.28 .28 	ĺ	 8 	 0

Table 16.--Erosion Properties--Continued

Map unit symbol		Erosion factors			Wind erodi-	•
and soil name	Depth	. — —	•	l I T	bility group	bility
	————	¦	¦	¦	<u> </u>	¦
297203 Delaware 	0-14 14-48 48-72	.28	.28	 4 	 3 	 86
297204 Delaware	0-14 14-48 48-72	.28	 .28 .28	 4 1	 3 	 86
297205 Delaware	0-14 14-48 48-72	•	.28	 4 	 3 	 86
297209 Philo	0-6 6-36 36-70	. 32	. 32	 4 4	 5 	 56
297210 Barbour	0-10 10-38 38-72	.32 .32	.37 .20	 3 	 5 	 56
297216 Wurtsboro		.28	 .32 .32	 4 4	 8 1	 0 1
297217 Wurtsboro		.24 .24 .28 .28	. 32	 4 4	 8 1	 0 0
297227 Arnot		17 .17	.24	 1 1 	 8 	 0
297228 Arnot	0-3 3-10 10-14 14-24	1 .17	.24	 1 1 	 8 	 0 1
297229 Wyoming		 .17 .17 .17	.24	ĺ	 	 48
297230 Wyoming		•	.24 .24	ĺ	 6 	 48
297231 Wyoming	3-33 33-72	.17 .17 .17	.20 .24 .24	 5 	 6 	 48

Table 16.--Erosion Properties--Continued

 Map unit symbol					erodi-	erodi-
and soil name 		•	Kf	ΙT	bility group	index
	In	<u> </u>	¦	!	!	<u> </u>
297236 Suncook	0-10 10-70		1.15	 5 	 2 	 134
297237 Mardin 	8-17	. 24 .24 .24 .24 .24	.32 .28 .28 .32 .32	 3 	i .	 0
297238 Mardin 	8-17	. 24 .24 .24 .24 .24	28 .28 .32 .32	 	 8 	 0
297239 Mardin 	8-17	. 24 .24 .24 .24 .24 .24	. 28 .28 .32 .32 .32	 	 8 	 0 0 1 1
297240 Mardin 	8-17	.24 .24 .24 .24 .24	28 .28 .32 .32	 	 8 	 0 0 1 1
297241 Unadilla 	0-13 13-49 49-80	.49 .64	.64	İ	 5 1	 56
297242 Shohola		.20 .24 .24	.37	 	 8 	 0
 Edgemere 	2-5	:	.10 .43 .37 .55		 8 	 0
297243 Shohola 	0-3 3-24 24-72	.20 .24	.37	 3 	 8 8	
 Edgemere 	5-24 24-66		.10 .43 .37 .55	I	 8 	 0

Table 16.--Erosion Properties--Continued

Map unit symbol		Erosion factors			Wind erodi-	
and soil name	_		•		bility group	-
		¦	<u> </u>	¦	<u> </u>	<u> </u>
297244 Lordstown 	3-28 28-30		.32 .37	 2 	 8 	 0
Swartswood	4-32	 .17 .20 .20	.24	İ	 8 	 0
297247 Chenango		.10	.28 .20	 	 5 1	 56
297248 Chenango	0-10 10-29 29-70	 .28 .17	 .43 .28	İ	 5 1	 56
297249 Chenango		.28 .17 .10	.43 .28 .20	İ	 5 	 56
297253 Craigsville	5-27	 .17 .17	 .28 .28	 5 	 8 8	
 Wyoming 		 .17 .17 .17	.24	İ	 8 	 0
297254 Pits, shale	0-1 1-2	 	 	 	 8 	 0
Pits, gravel		 	 	 	8	0
298049 Wurtsboro, extremely stony 	0-2 2-3 3-5 5-6 6-18 18-24 24-30	.17	.32 .37 .32 .32 .32	 	 5 	 56
298050 Wurtsboro, extremely stony	0-2 2-3 3-4 4-6 6-18 18-24 24-33 33-60			 	 	 86

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name	Depth	 Kw	 Kf	l I T	bility group	bility
298050 Swartswood, extremely stony	0-1 1-2 2-3 3-4	 .24 .37 .24 .17	37 .37 .37 .37	 	 5 	 56
298051	3-4 4-6	.17	. 32 .32 .32 .32 .32	İ	; 3 	
Swartswood, extremely stony	1-2 2-3 3-4	•	37 .37 .37 .37	 3 	 5 	 56
298075 Colonie 		1.10	.43 .10 .10	•	 2 	 134
298188 Lackawanna, extremely stony	2-3 3-7 7-8	1.28	. 49 .43 .55 .55 .55	 3 3 	 5 1 1 1 1	 56
298189 Lackawanna, extremely stony	2-3 3-7 7-8 8-16 16-24 24-29 29-60	.28 .20	.43 .55 .55 .55	 3 3 1 1 1	 5 1 1 1 1	 56

Table 16.--Erosion Properties--Continued

		Erosion factors				Wind erodi-	
Map unit symbol and soil name	Depth	 Kw	 Kf	l I T	erodi- bility group	bility	
298221 Swartswood, extremely stony	3-4	24 .17 .15	.37 .37 .28	 3 	 5 	 56 	
298222 Swartswood, extremely stony	0-1 1-2 2-3 3-4			 3 	 5 	 56 	
298223 Swartswood, extremely stony	3-4	.24 .17 .15	.37 .37 .28	 3 	 5 	 56 	
298255 Delaware, rarely flooded	4-11 11-20 20-33	.24 .43 .49 .43 .43	.24 .43 .49 .43 .43	 5 	 3 3 1 1 1	 86 	
298256 Delaware, rarely flooded	4-11	. 49 . 43 . 43	. 28 .24 .43 .49 .43 .43	 	 3 3 	 86 	
298257 Wallpack 	9-16 16-25 25-65	.32 .32 .28 .20	.55 .49 .49	l I	 5 	 56 	

Table 16.--Erosion Properties--Continued

		l Emosion footons				
 Map unit symbol	Depth	Erosion factors		ctors	Wind erodi-	
and soil name	- 	 Kw	 Kf	l I T	bility group	bility
		¦	¦	¦	¦	¦
298258 Wallpack 	3-9 9-16	.28	. 49 .55 .49	 3 	 5 	 56
298259 Wallpack, extremely stony	2-5 5-18	37 .37 .24 .32	55 .49 .49	•	 	
298260 Wallpack, extremely stony	2-5	.37 .37 .24 .32 .32	.49 .55 .49 .49	 3 	 6 6 1 1 1	 48
298261 Wallpack 	9-16	.43 .32 .32 .32	.43 .49 .55 .49	İ	 5 	 56
298262 Wallpack, extremely stony 	2-5 5-18 18-24 24-42	. 37 .37 .24 .32	.49 .55 .49 .49	•	 6 6 	 48
298265		 	 	 	 	
Venango, extremely stony 	1-6	. 49 .32 .32	.49 .43 .43	I I	 6 	 48
298266 Venango, extremely stony	6-16 16-22 22-34 34-60	.49 .32 .32 .24	.49 .43 .43 .43	 	 6 1 1 1	 48 48

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name		 Kw	 Kf	l I T	bility group	bility
200400	In	<u>:</u>	<u>:</u>	<u> </u>	<u> </u>	<u> </u>
298409 Swartswood, extremely stony	2-3 3-4 4-21	 .24 .37 .24 .17 .15	37 .37 .37 .37	 3 	 5 	 56
298411 Swartswood, extremely stony	1-2 2-3 3-4		37 .37 .37 .37	 3 	 5 	 56
298413 Swartswood, extremely stony	1-2 2-3 3-4 4-21	 	37 .37 .37 .28	 3 	 5 	 56
318498 Hazen, very stony 		.02 .02	24 .24 .10 .05	 2 1 1 1	 5 	 56
Hoosic, very stony 	1-9	.10 .05 .02 .02 .02	.24 .20 .10 .05 .05	İ	 6 	 48
318533 Hazen, very stony 	1-10 10-18	.02 .02	24 .24 .10 .05	 	 5 	 56
Hoosic, very stony 	1-9 9-21 21-27 27-37 37-49 49-60	.02 .02 .02	.24 .20 .10 .05 .05	 	 6 	 48

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name 		 Kw	 Kf	 T	bility group	_
	In	<u>'</u>	<u>'</u>	<u>'</u>	<u> </u>	<u>'</u>
319783 Catden		i	 	 2 	 5 	 56
319784 Fredon, very stony	1-8 8-14	. 02 .02 .02 .02	.55 .37 .37 .10 .05 .05	 3 	 5 	 56
Halsey, very stony 	1-5 5-11 11-20 20-25	.02	32 .32 .55 .20 .05 .05	 3 	 5 	 56
543222		<u>.</u>	! !		<u> </u>	! !
Andover, extremely stony 	0-8 8-17 17-53 53-65	.17	.20 .20	 3 	 8 	 0
Buchanan, extremely		 	 	 	İ	
stony 	0-6 6-23 23-47 47-61	.17	.28	4 	8 	0
543243 Berks 	0-10 10-26 26-33 33-43	.17 .17	.24 .24	3 	 6 	 48
Weikert 	8-15	.20 .20	.32 .32 .28	l I	 6 	 48
543246 Buchanan		 .24 .24	.28	İ	 6 	 48
543247 Buchanan, extremely stony	3-21 21-65	.24 .24 .17	.28	ĺ	 8 	

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name 		 Kw	•	 T	bility group	_
	In	¦	¦	¦	;	¦
543257 Chippewa 	0-8 8-16 16-48 48-80	.24	.37 .28	. – I I	 8 	 0
543258 Chippewa 			.37 .28	İ	 8 	 0
543259 Chippewa, extremely stony		.24	.32 .32	 2 	 8 	 0 1
543271 Delaware 	0-10 10-40 40-87	 .28 .28	 .28 .28	 5 	 3 	 86
543276 Fluvaquents	0-6 6-62	.32		 5 	 5 	 56
543292 Hazleton, extremely stony	0-6 6-43 43-55 55-80	.24	.32 .20	 3 	 8 	 0
543293 Hazleton, extremely stony		•	.32 .20	 3 	 8 	 0 1
543299 Laidig, extremely stony		.24	.28 .20	 	 5 	 56
543300 Laidig, extremely stony	3-38	•	.32 .28 .20	ĺ	į	 56
543304 Laidig 		 .24 .24	.32	İ	 5 	 56
Rubble land	0-60	 	 	 	 8	l I 0
 543318 Rubble land 	0-60	 .02 		 5 	•	

Table 16.--Erosion Properties--Continued

 Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name	_	 Kw	•	l I T	bility group	_
	———	¦	¦	¦	¦	¦
543327 Swartswood 			.24	 4 	 6 	 48
543328 Swartswood	0-11 11-34 34-47		.24	İ	 6 	 48
543330 Swartswood, extremely stony	0-11 11-34 34-47		.24	 	 8 	
Wurtsboro, extremely stony		.24 .28	.28 .32 .32	4 	 8 	
543331 Swartswood, extremely stony	11-34 34-47	.20	.24	i I	 8 	 0
Wurtsboro, extremely stony	11-34	.20 .24 .28	.24 .32 .32	4 	 8 1	
543359 Volusia 	8-15	 .24 .24 .24 .24	.28	İ	 5 	 56
543360 Volusia, extremely stony 			.28	 2 	 8 8 	 0
 Wurtsboro 	0-10 10-20 20-64	.28 .28	.32	İ	 6 	 48
543375 Wurtsboro		 .28 .28	 .32 .32	İ	 6 	 48
612280 Scio 	0-6 6-13 13-23 23-28 28-50 50-59 59-72	.37 .37 .55 .55 .55 .55	.37 .55 .55 .55 .55	 	 5 	 56

Table 16.--Erosion Properties--Continued

 Map unit symbol	Depth				erodi-	erodi-
and soil name		 Kw	•	 T	bility group	
		¦	¦	¦	¦	¦
612666 Colonie	0-2	 .43	 .43	l I 2	I I 2	 134
	2-11	•		•	-	134
i		1.10	1.10	İ	İ	İ
!	24-40				!	ļ .
<u> </u>	40-62	.10 	.10 	 	1	
612668		i	i	i	i	i
Hoosic, very stony] 3	6	48
<u> </u>		.10 .05		!	1	<u> </u>
¦		1 .03			1	! !
i	27-37	•	•		i	i
i	37-49	.02	.05	ĺ	İ	ĺ
	49-60	.02	.05		1	l '
Hazen, very stony	0-1	 	 	2	l 5	ı 56
l l		.24		I	I	I
!	10-18				!	!
<u> </u>	18-29 29-41	•	•			! !
i	41-60				i	i I
		ļ.	ļ .	!	ļ.	!
612724 Lordstown, very rocky	0-1	 	 	I I 2	I I 5	I I 56
			•	. – i	i	İ
I		.37		I	1	I
!		.37	•		!	!
<u>'</u>	17-22	.24 .24		! !	1	
i	22-36		•	i	i	i
į	36-80	i	i	İ	İ	ĺ
 Wallpack, very rocky	0-1	 	 	I I 3	I I 6	I I 48
i	1-2	.24	•	İ	İ	İ
ļ.		.37		•	1	l
	5-18 18-24	.37 .24				
¦	24-42	•	•			! !
i	42-60			:	i	i
612732		1	<u> </u>			
Atherton, very poorly		İ	! 	! 	i	i I
drained	0-2			5	6	48
!				!	!	!
<u> </u>		.24 .37		! !		! !
i i	10-18				i	<u>'</u>
i	18-29			•	i	i
I				I	1	I
!	32-41				!	!
<u> </u>	41-45 45-50			 		
i	50-60			i	i	i
į	60-70			İ	İ	İ
Atherton, poorly		 	I I	 	 	
drained	0-6	.32	.32	5	6	48
		.49			I	l I
<u> </u>	12-30 30-40				1	I I
i				•	i	i i
I		I	I	I	I	I

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name	Берен	ı	 Kf	l I T	bility group	bility
		¦	¦	¦	¦	¦
612738 Fluvaquents, occasionally flooded 	5-12 12-18	.20 .20	.20 .20	 5 1 	 5 1 	 56
612753 Wallpack, aeolian mantle, very stony 	8-14 14-21 21-26	28 .43 .49 .32	. 28 .43 .49 .49	 5 	 3 	 86
 		.15 .17 .28	.43	 	 	
612756 Wallpack, aeolian mantle, very stony	2-8 8-14 14-21 21-26 26-31	28 .43 .49 .32 .15 .17	. 28 .43 .49 .49 .43 .43	 5 5 1 1 1	 3 1 1 1 1	 86 1 1 1 1
612757 Wallpack, aeolian mantle, very stony	2-8 8-14 14-21 21-26	28 .43 .49 .32 .15 .17	. 28 .43 .49 .49 .43 .43	 5 	 3 3 1 1 1 1	
612767 Wellsboro, extremely stony 		.28 .15	55 .55 .55 .55	İ	 5 	 56
612768 Wellsboro, extremely stony	8-15 15-24 24-29 29-37 37-60	32 .28 .15 .15	.55 .55 .55 .32 .32	 	 5 	 56

Table 16.--Erosion Properties--Continued

		Erosion factors				
Map unit symbol and soil name	Depth	!			erodi-	
and soli name		Kw	Kf	l I T	bility group	
	In	<u> </u>	!	¦	¦	¦
613393 Alden, extremely stony-	0-2	 	 	I I 3	I I 6	I I 48
Hiden, exclemely stony		1 .28	•	1	i	l -20
i		.49	•	i	i	i
I	14-28			I	1	I
	28-43			!	!	ļ
<u> </u>	43-60	.49 	.49 	! !		
613447 Unadilla	0-8	 .32	' .32	' 5	 5	' 56
i	8-14	•	•		i	İ
I		.55	•	I	I	I
	25-39			!	!	ļ
	39-60	.64 	.64 	l I	1	
613448 Unadilla	0-8	 .32	 .32	 5	 5	 56
	8-14				i	İ
I	14-25			I	1	I
!	25-39	•	•	ļ	!	!
	39-60	.64 	.64 	! !	1	
614075		i	i	i	i	i
Wurtsboro, extremely		I	I	I	1	I
stony	0-2] 3] 3	86
		.20 .32	•	 		! !
i		1 .32		•	i	<u>'</u>
i		1.32			i	i
I	18-24			I	1	I
!	24-33 33-60			!		!
i	33-60	.±/ 	.32 	! 	i	!
Swartswood, extremely		i	İ	İ	i	İ
stony	0-1] 3	5	56
<u> </u>		.24 .37	•	 	1	
i		1 .24		i i	i	
i	4-21	.17	.37	İ	İ	İ
!	21-32	•	•	I	!	ļ
<u> </u>	32-60	.15 	.28	! !		! !
620179		i	i	i I	i	İ
Arnot, very rocky	0-1			1	5	J 56
!		1 .32		!	!	!
		.43 .43		! !		! !
i		.17		i	i	i
i	12-17			İ	İ	İ
	17-80		!	ļ .	!	ļ
 Lordstown, very rocky	0-1	 	 	l I 2	 5	l 56
		.24		2	i	, 50 I
i	2-3	.37	.37	İ	I	I
!		.37		ļ .	!	!
	5-17 17-22		•	i I	I	l I
'	22-36			i i	i	İ
i	36-80			İ	İ	İ
I		I	I	I	1	I

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-		
and soil name	 	Kw		 T 	bility group	index	
620180	In	¦	¦ 	' 	¦	! ! !	
Arnot	1-2 2-3 3-4	. 32 .43 .43 .17 .10	.32 .43 .43 .49 .49	 	5 	56 	
Lordstown	1-2 2-3 3-5	. 24 .37 .37 .24 .24 .15	.24 .37 .37 .37 .49	I I	5 	56 	
Rock outcrop.		 	 	 	 	 	
620181 Arnot	2-3 3-4	. 43 .43 .17 .10	. 43 .49 .49	 	 5 	 56 	
Lordstown	1-2	. 24 .37 .37 .24 .24 .15	.24 .37 .37 .37 .49	 	 5 	 56 	
Rock outcrop.	 	 	 	 	 	 	
623089 Chippewa, extremely stony	2-4 4-8	.49	.49 .49 .49 .49	 	 6 6 1 1 1	 	
623109 Farmington	0-1 1-3 3-9 9-15 15-80	•	.64	İ	5 	 56 	
Rock outcrop.	 	 	 	 	 	 	

Table 16.--Erosion Properties--Continued

 Map unit symbol	Depth				erodi-	erodi-
and soil name 		 Kw	•	 T 	bility group	_
		¦	¦	¦	¦	¦
624811 Galway, very rocky	2-3	1.24	.49	 2 	 5 	 56
624813 Lackawanna, extremely stony	3-7 7-8 8-16		. 49 .43 .55 .55 .55	 3 		 56
624816 Lordstown, very rocky	1-2 2-3 3-5	1.15	37 .37 .37 .49	 2 	5 5 	 56
Wallpack, very rocky 	1-2 2-5 5-18	37 .37 .24 .32	. 37 .49 .55 .49 .49	 3 	 6 	 48
624822 Lordstown 	2-3 3-5	24 .24 .15 	. 37 .37 .37 .49 .43	 2 2 	 5 	 56
	3-9	. 43 .32 .32 .32	.43 .49 .55 .49	 	 5 	 56
624823 Lordstown 	0-1 1-2 2-3 3-5 5-17 17-22 22-36 36-80	 .24 .37 .37 .24 .24 .15	 .24 .37 .37 .37 .49 .43	İ	 5 	 56

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name	_	 Kw	 Kf	l I T	bility group	_
<u> </u>	In	¦	¦	¦	¦	¦
624823 Wallpack 	3-9		. 49 .55 .49	 3 	 5 	 56
624824 Lordstown	2-3	.37 .37 .24 .24 .15	37 .37 .37 .49	 2 	 5 	 56
Wallpack 	3-9		. 49 .55 .49	 3 	 5 	 56
624826 Manlius, very rocky 		1.10	.55	 2 	 7 	 38
Nassau, very rocky 		•		 1 	 7 	 38
624827 Nassau, very rocky	0-7 7-13 13-80		 .43 .64 	 1 	 7 	 38
Manlius, very rocky	0-9 9-20 20-29 29-80	1.10	.55	 2 	 7 	 38
624828 Nassau, very rocky	0-7 7-13 13-80			 1 	 7 1	 38
Manlius, very rocky 	0-9 9-20 20-29 29-80	1.10	.55	 2 	 7 	 38
624829 Nassau, very rocky 	0-7 7-13 13-80			 1 	 7 1 	 38

Table 16.--Erosion Properties--Continued

Map unit symbol		Erosion factors			Wind Wind erodi- erodi		
and soil name	•	 Kw	•	l I T	bility group	bility index	
- 	———		¦	¦	<u> </u>		
624829 Manlius, very rocky 	0-9 9-20 20-29 29-80	.10	.55	 2 	7 7 	 38 	
624832 Nassau	0-1	 	' 	 1	 7	 38	
		.10		 	 	 	
Rock outcrop.		l I	 	 		 	
624841 Oquaga 	1-4		.49	 2 	 6 1 	48 	
Rock outcrop.			! 				
624845 Rock outcrop.		 	 	 	 		
Farmington		.64	.64	 1 	5 	56 	
 Galway 	3-5	.32 .24	.24 .49	 2 	 5 	 56 	
624846 Rock outcrop.		 	 	 	 		
Arnot 	2-3 3-4	.43 .43 .17 .10	 .32 .43 .43 .49 .49	l I	5 	56 	
Rubble land	0-60	 	 	 	 	 	
626816 Udifluvents, occasionally flooded	3-16 16-22 22-27 27-32 32-60	.28 .28 .28 .15	.28 .28 .28 .15	 5 		134 134 	

Table 16.--Erosion Properties--Continued

 Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name -		 Kw	•	l I T	bility group	_
	In	¦	¦	¦	¦	¦
635458 Oquaga, very rocky	1-4	.20 .20 .10	.28 .49	 2 	 6 	 48
Lackawanna, very rocky- 	3-7 7-8	. 20 .28 .24 .32 .32	. 32 .49 .43 .55 .55	 	 5 	 56
635459 Oquaga, very rocky 		.20 .20 .10	.28 .49	 2 	 6 	 48
Lackawanna, very rocky- - - - - -	2-3 3-7 7-8	.28	. 32 .49 .43 .55 .55	İ	 5 	 56
740953 The state of the state		.49 .43 .43	. 28 . 24 . 43 . 49 . 43 . 43	 	 3 1 1 1 1	 86
740968 Nassau, very rocky		 .17 .10 	.64	İ	 7 	 38
Manlius, very rocky 		.10	.55 .64	İ	 7 	 38
740969 Nassau, very rocky		.17 .10	.64	ĺ	 7 1	 38
 Manlius, very rocky 	9-20 20-29 29-80	i	.55 .64	 	İ	 38

Table 16.--Erosion Properties--Continued

 Map unit symbol					erodi-	erodi
and soil name 		 Kw 	•	 T 	bility group	-
	In	i	i	i	i	i
740971 Oquaga, very rocky		.20 .10	.28 .49 .55	 2 	 6 	 48
Lackawanna, very rocky- - 	2-3 3-7 7-8	.28	. 32 .49 .43 .55 .55	 	5 	 56
740972 Oquaga, very rocky 	1-4		.28 .49	 2 	 6 	 48
Lackawanna, very rocky- 	2-3 3-7 7-8	. 20 .28 .24 .32 .32 .32	. 32 .49 .43 .55 .55	İ	 5 	 56
740974 Oquaga 		•	.28 .49	 2 	 6 	 48
Rock outcrop.		! !	! !	! !		! !
740975 Rock outcrop	0-80	 	 	 		
Arnot 	0-1 1-2 2-3 3-4 4-12	.10	. 32 .43 .43 .49 .49	 	 5 	 56
 Rubble land 	0-60	 	 	 	 	
740987 Scio	0-6 6-13 13-23 23-28 28-50 50-59 59-72	.37 .55 .55 .55 .55	.37 .37 .55 .55 .55 .55	 	 	56

Table 16.--Erosion Properties--Continued

Map unit symbol		Erosion factors			erodi-	erodi-
and soil name 		 Kw 	Kf	 T 	bility group 	bility index
740988	In	i	i		į	!
Udifluvents, occasionally flooded	3-16 16-22	.28 .28 .28	.28 .28 .28	 	 2 	 134
740991 Unadilla 	14-25	.55	. 43 .55 .55	 	 5 	 56
740992 Unadilla	8-14	.55 .55	. 43 .55 .55	 	 5 	 56
740995 Wellsboro, extremely stony	8-15 15-24 24-29	.32 .32 .28 .15	.55 .55 .55 .32	 	 5 	 56
740996 Wellsboro, extremely stony	0-8 8-15 15-24	.28 .15	.55 .55 .55 .32	 	 5 	 56
741149 Lackawanna, extremely stony	0-2 2-3 3-7 7-8 8-16 16-24	.32 .28	.49 .43 .55 .55	 	 	 56
741150 Lackawanna, extremely stony	0-2 2-3 3-7 7-8 8-16 16-24 24-29 29-60	.32 .28 .20	. 49 .43 .55 .55 .55	 	 5 5 1 1 1	

Table 16.--Erosion Properties--Continued

Map unit symbol		Erosion factors			Wind erodi-	
and soil name	 	 Kw	 Kf 	 T 	;	bility index
801114 Oquaga	· · · ·	 .20 .20 .10	 .28 .49	 2 2 1	 6 	
Rock outcrop.	 	! !	 	 		!
810906 Oquaga	0-1 1-4 4-20 20-25 25-80	1.20		 2 	 6 	 48
Rock outcrop.		 	' 	' 		,
1147465 Alden, extremely stony-		.49 .43 .43	.49 .43 .43	 	 6 	 48
1147467 Arnot, very rocky	1-2 2-3	. 32 .43 .43 .17 .10	. 43 .43 .49	 	 5 	 56
Lordstown, very rocky	1-2 2-3 3-5	. 24 .24 .37 .37 .24 .24		 2 	 5 	 56
1147468 Arnot	1-2 2-3 3-4	. 32 .43 .43 .17 .10	. 43 .43 .49 .49 	 	 5 	 56
Lordstown	1-2 2-3	 .24 .37 .37 .24 .24	. 24 .24 .37 .37 .37	 	 5 	 56
Rock outcrop.		•	 	 	i I	

Table 16.--Erosion Properties--Continued

Man mails armhal	 	Erosion factors				
Map unit symbol and soil name	Depth 	¦	1	1	erodi- bility	
	İ	Kw	•	T	group	_
11.47.460	In	<u> </u>	<u> </u>	<u> </u>	¦	<u>'</u>
1147469 Arnot	 0-1	 	 	 1	I I 5	I I 56
		.32	•	i -	i	
I		.43		I	1	I
		.43 .17		:	!	!
	4-12 12-17	•	•	<u> </u>	<u> </u>	! !
	17-80			İ	į	İ
Lordstown		•	•	1 2	5	 56
		.24 .37		 	1	
		.37	•	:	i	İ
I		.24		I	I	I
	17-22 22-36			1	1	
	36-80			İ	i	i I
Rock outcrop.		 	 	 	 	
1147470					<u> </u>	
Atherton, very poorly drained	l l 0-2		 	I I 5	I I 6	I I 48
		i		i	i	i
<u> </u>		.24		I	1	I
	8-10 10-18	.37 43		1		
	18-29			:	i	İ
I	29-32			I	I	I
	32-41 41-45			:	1	
	45-50			i	;	!
	50-60 60-70			:	!	ļ .
	60-70	į	į	! !	!	! !
Atherton, poorly drained		.32		 5	6	 48
	6-12 12-30	.49	•	:	1	<u> </u>
	30-40			:	i	!
	40-60	.43	.43	į	į	İ
1147471						!
Catden	0-2 2-13			2	5 	56
	13-20		' 	i	i	İ
<u> </u>	20-32			I	1	I
	32-60 	 	 	 	 	
1147474	<u> </u>	1	1		1	
Chippewa, extremely stony	 0-2		' 	 3	I I 6	 48
-	2-4	.37	.37	I	I	I
	4-8 8-13	1 .43			1	<u> </u>
	8-13 13-21	•		! 		!
i	21-29	.49	.49	I	I	I
	29-34 34-60	•		l I	1	[
	 	. 4 3	. 4 3	<u>'</u>		i

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors		ctors	Wind erodi-	
and soil name	Deptii	 Kw	l Kf	l I T	bility group	bility
1147475 Colonie	0-2 2-11 11-24 24-40 40-62	.43 .43 .43 .10	.43 .43 .43 .10	 	 2 	 134
1147478 Delaware, rarely flooded		.24 .43 .49 .43 .43	. 43 .49 .43 .43	 	 3 3 	 86
1147482		32 .55 .37 .37 .02 .02 .02	.37 .10 .05 .05	 	 5 1 1 1 1	 56 56
Halsey, very stony 		32 .32 .55 .20 .02 .02 .02	.55 .20 .05 .05 .05	 	 5 	 56
1147485 Hazen, very stony	0-1 1-10 10-18 18-29 29-41 41-60	24 .02 .02	.24 .10 .05	 	 5 	 56
Hoosic, very stony 	1-9 9-21 21-27 27-37 37-49 49-60	. 10 .05 .02 .02 .02 .02	.05 .05 .05	 	 6 	 48

Table 16.--Erosion Properties--Continued

Map unit symbol		Erosion factors		Wind erodi-		
and soil name	Depth	 Kw	Kf	 T	bility group	bility
1147490 Hoosic, very stony	1-9	 .10 .05 .02 .02 .02	. 24 .20 .10 .05 .05	 	 6 6 1 1	 48
Hazen, very stony 	0-1 1-10 10-18 18-29 29-41 41-60	.24 .02 .02	 .24 .24 .10 .05	 2 	 5 	 56
1147491 Hoosic, very stony 	1-9	1 .02	. 24 .20 .10 .05 .05	 	 6 	 48
Otisville, very stony 	1-2 2-7 7-11 11-19	.05 .05 .05 .05 .05 .02	.10 .20 .10 .10 .05 .05	:	 5 	 56
1147492 Lackawanna, extremely stony 	3-7 7-8	.28	.49 .43 .55 .55	:	 	 56
1147500 Wurtsboro, extremely stony		1.17	.37 .32	 3 	 	

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	•
and soil name	Depth	 Kw	 Kf	 T 	bility group	bility
1147501 Wurtsboro, extremely stony	2-3 3-4 4-6 6-18	•	. 32 .32 .32 .32 .32	 	 3 	
Swartswood, extremely stony	1-2 2-3 3-4	•	37 .37 .37 .37	 3 1 	 5 	 56
1147502 Wurtsboro, extremely stony	2-3 3-4 4-6 6-18 18-24 24-33 33-60	 .20 .32 .32 .32 .32 .17	. 32 .32 .32 .32 .32	 3 	 3 3 1 1 1	 86
Swartswood, extremely stony	0-1 1-2 2-3 3-4	 .24 .37 .24 .17 .15	.24 .37 .37 .37 .28	 3 	 5 	 56
 1147527 Udorthents 	0-12 12-72	 .32 .20	•	 5 	 5 1	 56
Urban land. 1147532 Udorthents	0-12 12-72	•	•	•	 5 	 56
1147533 Wurtsboro, extremely stony	0-2 2-3 3-4 4-6 6-18 18-24 24-33 33-60	 .20 .32 .32 .32 .17 .17	.20 .32 .32 .32 .32 .32 .32	 	 3 3 1 1 1 1	 86

Table 16.--Erosion Properties--Continued

Map unit symbol	Depth	Erosion factors			Wind erodi-	
and soil name	Deptii	 Kw	•	ı	bility group	bility
1147533 Swartswood, extremely stony	0-1 1-2 2-3 3-4	.24 .17 .15	.37 .37	 3 	 5 	
1948749 Arnot 	0-8 8-16 16-26	 .24 .17 	 .28 .24 	 1 	 5 	 56
1948750 Arnot	0-8 8-16 16-26		– -	 1 	 5 	 56
1948751 Arnot	0-8 8-16 16-26	.17	 .28 .24 	 1 	 5 1	 56
1948774 Conotton		 .24 .24 .10	.64	 4 4	 8 8	 0
1948775 Conotton	0-9 9-45 45-80	 .24 .24 .10	•	 4 4	 8 	 0
1948776 Conotton	0-9 9-45 45-80	– -	.64	 4 4	 8 8	 0
1948777 Conotton	0-9 9-45 45-80	•		 4 4	 8 8	 0
1948797 Manlius 			.28	 2 	 8 	 0
1948802 Manlius 	0-8 8-24 24-32 32-40	.28 .20 .20	.28 .32	 2 1 	 8 	 0
1948818 Manlius 	8-24 24-32 32-40		. 32 . 32 . 28 . 32 	 2 1 	 8 	 0

Table 16.--Erosion Properties--Continued

		Eros	ion fa	ctors	Wind	Wind
Map unit symbol	Depth	l			erodi-	erodi-
and soil name			I	I	bility	bility
1		Kw	Kf	T	group	index
1		l	I	I	II	l
I.	In		1	I		
1948832		l	1	I		
Penargy1	0-12	.17	.32	5	5	56
1	12-74	.15	.24	I	1 1	
1	74-80	.28	.24	I	1 1	
1	80-90			I		
1		l	1	I		
1948846		l	1	I	1 1	
Phelps	0-10	.37	.37	5	5	56
1	10-22	.24	.28	I		
1	22-30	.24	.28	I	1 1	
1	30-79	.17	.28	I		
1		I	I	I	1 1	
1948855		I	I	I	1 1	
Udorthents, loamy	0-5	.37	.37	5	5	56
1	5-40	.37	.37	I	1 1	
1	40-70	.32	.37	I	1 1	
1		I	I	I	1 1	
1948989		I	I	I	1 1	
Urban land	0-6				8	0
1		I	I	I	1 1	
Delaware	0-10	.28	.28	5	3	86
1	10-40	.28	.28	I	1 1	
1	40-87	.28	.28	I	1 1	
i		I	I	I	ı i	

Table 17. -- Total Soil Carbon

[This table displays soil organic carbon (SOC) and soil inorganic carbon (SIC) in kilograms per square meter to a depth of 2 meters or to the representative top depth of any kind of bedrock or any cemented soil horizon. SOC and SIC are reported on a volumetric whole-soil basis, corrected for representative rock fragments indicated in the database. SOC is converted from soil organic matter by horizon for the fraction of the soil less than 2 millimeters in diameter. If soil organic matter is indicated in the database as pwnn, SOC is assumed to be zero. SIC is converted from the content of calcium carbonate by horizon in the fraction of the soil less than 2 millimeters in diameter. If the content of calcium carbonate is indicated in the database as pwnn, SIC is assumed to be zero. A weighted average of all horizons is used in the calculations." Only major components of a map unit are displayed in this table]

Map unit symbol, component name, and component percent	 SOC	sic
	kg/m²	kg/m²
290836 Hoosic, very stony (50 percent)	 	0
Otisville, very stony (40 percent)	4	0
296265 Alden (100 percent)	 33	0
296269 Fluvents, (alluvial land) (70 percent)	3	0
296271 Alvira (55 percent)	5	0
Watson (35 percent)	4	0
296272 Bath (85 percent)	 6	0
296273 Bath (85 percent)	 6	0
296274 Bath (85 percent)	6	0
296275 Bath (90 percent)	4	0
296276 Bath (90 percent)	 4	0
296277 Benson (55 percent)	 5	0
296278 Benson (60 percent)	5	0
Rock outcrop (20 percent)	0	0
296279 Benson (60 percent)	 5	0
Rock outcrop (25 percent)	 0 	0

Table 17.--Total Soil Carbon--Continued

	<u> </u>	
Map unit symbol, component name, and component percent	soc	 SIC
20000	kg/m²	kg/m²
296280 Braceville (90 percent)	 3 	l 0
296281 Braceville (90 percent)	 2	l I 0
296283 Buchanan (90 percent)	 5	0
296288 Chippewa (48 percent)	13	0
Norwich (48 percent)	 13	0
296289 Chippewa (47 percent)	 	 0
Norwich (47 percent)	 11	l I 0
296295 Udorthents, cut and fill (90 percent)	 	
296297 Dekalb (100 percent)	 	 0
296298 Dekalb (100 percent)	 4	0
296303 Hazleton (100 percent)	 3) 0
296304 Holly (100 percent)	 12) 0
296311 Lackawanna (40 percent)	 4) 0
Bath (30 percent)	6	0
296312 Lackawanna (80 percent)	 	0
296313 Lackawanna (80 percent)	 4) 0
296315 Lackawanna (80 percent)	 4	i I 0
296316 Lackawanna (80 percent)	 4	i I 0
296317 Laidig (100 percent)] 3	i i 0
296326 Lordstown (85 percent)	 3	i I 0
296327 Lordstown (85 percent)	 4	i I 0
296328 Lordstown (40 percent)	 3	i I 0
Oquaga (35 percent)	3 	0

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name, and component percent	I I I SOC	sic
	 kg/m²	kg/m²
296329 Mardin (85 percent)	 6 	0
296330 Mardin (85 percent)		0
296331 Mardin (85 percent)	 	0
296332 Mardin (87 percent)		0
296335 Meckesville (100 percent)	 	0
296337 Meckesville (100 percent)	 	0
296338 Morris (80 percent)	 	0
296339 Morris (75 percent)	 	0
296340 Morris (80 percent)	 	0
296341 Freetown, mucky peat (100 percent)	 170	0
296342 Paupack, mucky peat (shallow) (100 percent)	 	0
296343 Oquaga (50 percent)	 	0
Lackawanna (35 percent)		0
296344 Oquaga (55 percent)		0
Lackawanna (30 percent)		0
296346 Oquaga (50 percent)	3	0
Lackawanna (35 percent)		0
296347 Oquaga (60 percent)	 	0
Lackawanna (30 percent)		0
296348 Philo (85 percent)	 15	0
296349 Pope (90 percent)	 5	0
296350 Pope (90 percent)	 5	0

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name, and component percent	I SOC 	 SIC
	kg/m²	kg/m²
296351 Rexford, somewhat poorly drained (40 percent)	 8 	I 0
Rexford, poorly drained (35 percent)	9	0
296355 Sheffield (100 percent)	 9	
296363 Dystrochrepts, very stony (85 percent)	 3	
296369 Wayland (100 percent)	 	
296376 Wellsboro (80 percent)	 6	 0
296379 Wellsboro (85 percent)	 5) 0
296385 Wyoming (85 percent)	 	, 0
296386 Wyoming (85 percent)	 4	 0
296387 Wyoming (85 percent)	 4	, 0
296388 Wyoming (85 percent)	 4	, 0
296389 Wyoming (100 percent)	 4	, 0
296390 Water (100 percent)	 0	, 0
297185 Edgemere (42 percent)	 9	, 0
Shohola (42 percent)	4	0
297186 Edgemere (75 percent)	 9	I 0
297188 Manlius (40 percent)	 4	, 0
Arnot (35 percent)	3	0
Rock outcrop (15 percent)	 0 	 0
297189 Manlius (40 percent)	 6	, 0
Arnot (35 percent)	1	0
Rock outcrop (15 percent)	 0 	 0
297190 Braceville (82 percent)	 14	 0

Table 17.--Total Soil Carbon--Continued

	ı ı	
Map unit symbol, component name, and component percent	i i	SIC
297191	kg/m²	kg/m²
Wyalusing (85 percent)	, 6 	0
297192 Pope (95 percent)	 8 	0
297193 Paupack (90 percent)	 90	0
297196 Freetown (94 percent)	 170	0
297197 Manlius (90 percent)		0
297198 Manlius (86 percent)		0
297201 Oquaga (75 percent)		0
297203 Delaware (93 percent)	11	0
297204 Delaware (82 percent)	11	0
297205 Delaware (80 percent)	11	0
297209 Philo (85 percent)		0
297210 Barbour (85 percent)	 	0
297216 Wurtsboro (92 percent)		0
297217 Wurtsboro (88 percent)		0
297227 Arnot (88 percent)		0
297228 Arnot (85 percent)		0
297229 Wyoming (90 percent)		0
297230 Wyoming (90 percent)		0
297231 Wyoming (90 percent)		0
297236 Suncook (91 percent)		0
297237 Mardin (85 percent)		0

Table 17.--Total Soil Carbon--Continued

	l	<u> </u>
Map unit symbol, component name, and component percent	l soc 	 SIC
297238	kg/m² 	kg/m²
Mardin (85 percent)	9) 0
297239 Mardin (85 percent)	 9	0
297240 Mardin (85 percent)	 9) 0
297241 Unadilla (90 percent)	 19	0
297242 Shohola (62 percent)	4	0
Edgemere (29 percent)	 9	0
297243 Shohola (62 percent)	 	 0
Edgemere (29 percent)	 9	0
297244 Lordstown (40 percent)	 5	0
Swartswood (35 percent)	, , 7	0
297247 Chenango (86 percent)	 8	 0
297248 Chenango (85 percent)	 8	0
297249 Chenango (90 percent)	 8	0
297253 Craigsville (50 percent)	 3	0
Wyoming (40 percent)	3	0
297254 Pits, shale (40 percent)	 0	0
Pits, gravel (40 percent).		
298049 Wurtsboro, extremely stony (90 percent)	 9	0
298050 Wurtsboro, extremely stony (60 percent)	 9	0
Swartswood, extremely stony (40 percent)	7	0
298051 Wurtsboro, extremely stony (60 percent)	 9	 0
Swartswood, extremely stony (40 percent)	 7	0
298075 Colonie (80 percent)	 5	 0
298188 Lackawanna, extremely stony (85 percent)	 10	 0

Table 17.--Total Soil Carbon--Continued

	1 1	<u> </u>
Map unit symbol, component name, and component percent	soc	SIC
000100	kg/m²	kg/m²
298189 Lackawanna, extremely stony (85 percent)	10 10	0
298221 Swartswood, extremely stony (90 percent)	 7	0
298222 Swartswood, extremely stony (90 percent)	7	0
298223 Swartswood, extremely stony (85 percent)	7	0
298255 Delaware, rarely flooded (80 percent)	 	0
298256 Delaware, rarely flooded (80 percent)	6	0
298257 Wallpack (85 percent)	4	0
298258 Wallpack (85 percent)	4	0
298259 Wallpack, extremely stony (85 percent)	6	0
298260 Wallpack, extremely stony (85 percent)	6	0
298261 Wallpack (85 percent)	4	0
298262 Wallpack, extremely stony (85 percent)	6	0
298265 Venango, extremely stony (90 percent)	9	0
298266 Venango, extremely stony (85 percent)	9	0
298409 Swartswood, extremely stony (90 percent)	7	0
298411 Swartswood, extremely stony (90 percent)	 7	0
298413 Swartswood, extremely stony (85 percent)	7	0
318498 Hazen, very stony (60 percent)	10	0
Hoosic, very stony (35 percent)	7	0
318533 Hazen, very stony (50 percent)	 10	0
Hoosic, very stony (40 percent)	4	0
319783 Catden (85 percent)	 135 	 0

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name, and component percent SOC SIC 319784 Fredon, very stony (50 percent) 11 0 Halsey, very stony (40 percent) 13 0 543222 Andover, extremely stony (55 percent) 5 0 Buchanan, extremely stony (40 percent) 3 0 Buchanan, extremely stony (40 percent) 5 0 Weikert (25 percent) 3 0 543246 Buchanan (75 percent) 3 0 543247 Buchanan, extremely stony (80 percent) 2 0 543257 Chippewa (90 percent) 13 0 543258 Chippewa (90 percent) 13 0 543271 Delaware (90 percent) 9 0 543276 Fluvaquents (85 percent) 9 0 543292 Hazleton, extremely stony (90 percent) 3 0 543293 Hazleton, extremely stony (90 percent) 3 0 543299 Laidig, extremely stony (90 percent) 3 0 543304 Laidig, extremely stony (90 percent) 3 0 543318 Rubble land (40 percent) 0 0 0 543327 Swartswood (90 percent) 6 0		<u> </u>	
319784 11 0 Halsey, very stony (40 percent) 11 0 5432222 1 1 0 Andover, extremely stony (55 percent) 5 0 Buchanan, extremely stony (40 percent) 3 0 543243 8 1 0 Berks (65 percent) 5 0 Weikert (25 percent) 3 0 543246 1 1 0 543247 1 1 0 543247 1 1 0 543257 1 0 1 0 543258 1 0 1 0 543259 1 0 1 0 0 543271 1 0 1 0 0 0 543276 1 0 </th <th></th> <th>soc</th> <th>sic</th>		soc	sic
Fredon, very stony (50 percent) 11 0 Halsey, very stony (40 percent) 13 0 543222 543222 0 Andover, extremely stony (55 percent) 5 0 Buchanan, extremely stony (40 percent) 3 0 543243 5 0 Berks (65 percent) 5 0 Weikert (25 percent) 3 0 543246 6 8 8 Buchanan (75 percent) 3 0 543247 8 13 0 543258 13 0 Chippewa (90 percent) 13 0 543259 13 0 Chippewa, extremely stony (90 percent) 12 0 543271 9 0 543292 16 0 Fluvaquents (85 percent) 16 0 543293 16 0 Hazleton, extremely stony (90 percent) 3 0 543300 1 0 Laidig, extremely stony (90 percent) 3 0 543318 10	210704	kg/m²	kg/m²
543222 Andover, extremely stony (55 percent) 5 0 Buchanan, extremely stony (40 percent) 3 0 543243 Berks (65 percent) 5 0 Weikert (25 percent) 3 0 543246 Buchanan (75 percent) 3 0 543247 Buchanan, extremely stony (80 percent) 2 0 543257 Chippewa (90 percent) 13 0 543258 Chippewa (90 percent) 13 0 543259 Chippewa, extremely stony (90 percent) 12 0 543271 Delaware (90 percent) 9 0 543292 Hazleton, extremely stony (90 percent) 3 0 543293 Hazleton, extremely stony (90 percent) 3 0 543300 Laidig, extremely stony (90 percent) 3 0 543304 Laidig (50 percent) 3 0 543318 Rubble land (40 percent) 0 0 543327 Swartswood (90 percent) 6 0		11	l 0
Andover, extremely stony (55 percent) 5 0 Buchanan, extremely stony (40 percent) 3 0 543243 Berks (65 percent) 5 0 Weikert (25 percent) 5 0 Weikert (25 percent) 3 0 543246 Buchanan (75 percent) 3 0 543247 Buchanan, extremely stony (80 percent) 2 0 543257 Chippewa (90 percent) 13 0 543258 Chippewa (90 percent) 12 0 543259 Chippewa, extremely stony (90 percent) 12 0 543271 Delaware (90 percent) 9 0 543276 Fluvaquents (85 percent) 9 0 543292 Hazleton, extremely stony (90 percent) 3 0 543293 Hazleton, extremely stony (90 percent) 3 0 543299 Laidig, extremely stony (90 percent) 3 0 543300 Laidig, extremely stony (90 percent) 3 0 S43304 Laidig (50 percent) 3 0 Rubble land (40 percent) 3 0 0 543318 Rubble land (75 percent) 0 0 0 543327 Swartswood (90 percent) 6 0	Halsey, very stony (40 percent)	13	0
543243 Berks (65 percent)		5	0
Berks (65 percent) 5 0 Weikert (25 percent) 3 0 543246 Buchanan (75 percent) 3 0 543247 Buchanan, extremely stony (80 percent) 2 0 543257 Chippewa (90 percent) 13 0 543258 Chippewa (90 percent) 13 0 543259 Chippewa, extremely stony (90 percent) 12 0 543271 Delaware (90 percent) 9 0 543276 Fluvaquents (85 percent) 16 0 543292 Hazleton, extremely stony (90 percent) 3 0 543293 Hazleton, extremely stony (90 percent) 3 0 543300 Laidig, extremely stony (90 percent) 3 0 543304 Laidig (50 percent) 3 0 543318 Rubble land (40 percent) 0 0 543327 Swartswood (90 percent) 6 0 543328 543328	Buchanan, extremely stony (40 percent)	3	0
543246 Buchanan (75 percent) 3 0 543247 Buchanan, extremely stony (80 percent) 2 0 543257 13 0 543258 13 0 543259 13 0 543259 12 0 543271 9 0 543276 16 0 543292 16 0 4x12eton, extremely stony (90 percent) 3 0 543293 3 0 4x2eya 3 0 543300 3 0 Laidig, extremely stony (90 percent) 3 0 543304 3 0 Laidig (50 percent) 3 0 643318 10 0 8ubble land (40 percent) 0 0 543327 0 0 543328 0 0		5	0
Buchanan (75 percent)	Weikert (25 percent)	3	0
Buchanan, extremely stony (80 percent) 2 0 543257 Chippewa (90 percent) 13 0 543258 Chippewa (90 percent) 13 0 543259 Chippewa, extremely stony (90 percent) 12 0 543271 Delaware (90 percent) 9 0 543276 Fluvaquents (85 percent) 16 0 543292 Hazleton, extremely stony (90 percent) 3 0 543293 Hazleton, extremely stony (90 percent) 3 0 543299 Laidig, extremely stony (90 percent) 3 0 543300 Laidig, extremely stony (90 percent) 3 0 543304 Laidig (50 percent) 3 0 Rubble land (40 percent) 3 0 6 543318 Rubble land (75 percent) 0 0 543327 Swartswood (90 percent) 6 0 543327 Swartswood (90 percent) 6 0		3	0
Chippewa (90 percent)		2	0
Chippewa (90 percent)		13	0
Chippewa, extremely stony (90 percent)		13	0
Delaware (90 percent)		12	0
Fluvaquents (85 percent)		9	0
Hazleton, extremely stony (90 percent)		16	0
Hazleton, extremely stony (90 percent)		3	0
Laidig, extremely stony (90 percent)		3	0
Laidig, extremely stony (90 percent)		3	0
Laidig (50 percent)		3	0
543318	543304 Laidig (50 percent)	3	0
Rubble land (75 percent) 0 0 0 543327	Rubble land (40 percent)	0	0
Swartswood (90 percent) 6 0		0	0
		6	0
I I		6) 0

Table 17.--Total Soil Carbon--Continued

	ı	
Map unit symbol, component name, and component percent	soc	 SIC
543330	kg/m²	kg/m²
Swartswood, extremely stony (50 percent)	 14) 0
Wurtsboro, extremely stony (30 percent)	5 5	0
543331 Swartswood, extremely stony (50 percent)	14) 0
Wurtsboro, extremely stony (30 percent)	5	0
543359 Volusia (85 percent)	 8	0
543360 Volusia, extremely stony (85 percent)	 7 	 0
543374 Wurtsboro (90 percent)	 5 	 0
543375 Wurtsboro (90 percent)	 5 	l I 0
612280 Scio (80 percent)	13) 0
612666 Colonie (80 percent)	5	0
612668 Hoosic, very stony (60 percent)	 7	
Hazen, very stony (30 percent)	 10	0
612724 Lordstown, very rocky (50 percent)	 	
Wallpack, very rocky (40 percent)	 6	0
612732 Atherton, very poorly drained (60 percent)	 33	
Atherton, poorly drained (30 percent)	1 16	0
612738 Fluvaquents, occasionally flooded (90 percent)	 6	0
612753 Wallpack, aeolian mantle, very stony (85 percent)	5	0
612756 Wallpack, aeolian mantle, very stony (85 percent)	5	0
612757 Wallpack, aeolian mantle, very stony (85 percent)	 5	 0
612767 Wellsboro, extremely stony (85 percent)	 8	 0
612768 Wellsboro, extremely stony (85 percent)	 8	 0
613393 Alden, extremely stony (90 percent)	 16	 0

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name,		
and component percent	SOC 	SIC
613447	kg/m²	kg/m²
Unadilla (85 percent)	14	0
613448 Unadilla (85 percent)		0
614075 Wurtsboro, extremely stony (80 percent)		0
Swartswood, extremely stony (20 percent)	7	0
620179 Arnot, very rocky (55 percent)	 4	0
Lordstown, very rocky (40 percent)	7	0
620180 Arnot (45 percent)	 4	0
Lordstown (40 percent)	6	0
Rock outcrop (15 percent)	 0	0
620181	 	
Arnot (60 percent)	4 	0
Lordstown (25 percent)	6 	0
Rock outcrop (15 percent)	0 	0
623089 Chippewa, extremely stony (80 percent)	 	0
623109 Farmington (50 percent)	 	0
Rock outcrop (40 percent)	0 1	0
624811 Galway, very rocky (80 percent)	 10	0
624813 Lackawanna, extremely stony (85 percent)		0
624816 Lordstown, very rocky (50 percent)		0
Wallpack, very rocky (35 percent)	6	0
624822 Lordstown (50 percent)	 6	0
Wallpack (35 percent)		0
624823 Lordstown (50 percent)	 	0
Wallpack (35 percent)	 4	0
624824 Lordstown (50 percent)	 6	 0
Wallpack (35 percent)		
mailpack (35 percent)	4	

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name, and component percent	l I soc	l SIC
	ii	i
624826	kg/m ⁻ 	<i>kg/m²</i>
Manlius, very rocky (60 percent)	4) 0
Nassau, very rocky (25 percent)	4	0
624827 Nassau, very rocky (55 percent)	4	0
Manlius, very rocky (44 percent)	4	0
624828 Nassau, very rocky (55 percent)	 4	 0
Manlius, very rocky (44 percent)	 6	l I 0
624829]
Nassau, very rocky (55 percent)	4	0
Manlius, very rocky (44 percent)	6	0
624832 Nassau (50 percent)	 4	
Rock outcrop (45 percent)	l 0	l 0
624841 Oquaga (60 percent)	 6	 0
Rock outcrop (25 percent)	 0	l I 0
624845 Rock outcrop (45 percent)	 0	 0
Farmington (35 percent)	 6	l I 0
Galway (20 percent)	 10	l I 0
624846 Rock outcrop (40 percent)	 	 0
Arnot (30 percent)	 4	l I 0
Rubble land (20 percent)	l I 0	l I 0
626816	İ	j i
Udifluvents, occasionally flooded (90 percent)	10	0
635458 Oquaga, very rocky (55 percent)	l 6	l I 0
Lackawanna, very rocky (30 percent)	 10	l I 0
635459 Oquaga, very rocky (50 percent)	 6	 0
Lackawanna, very rocky (35 percent)	 10	l I 0
740953 Delaware, rarely flooded (80 percent)	 	
740968 Nassau, very rocky (55 percent)	 4	 0
Manlius, very rocky (44 percent)	l I 6	l I 0
	i	i ,

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name, and component percent	l I	SIC
740969 Nassau, very rocky (55 percent)		0
Manlius, very rocky (44 percent)		0
740971 Oquaga, very rocky (55 percent)	 	0
Lackawanna, very rocky (30 percent)		0
740972 Oquaga, very rocky (50 percent)	 	 0
Lackawanna, very rocky (35 percent)	 10	0
740974 Oquaga (60 percent)	 	0
Rock outcrop (25 percent)		0
740975 Rock outcrop (40 percent)	 	0
Arnot (30 percent)	4	0
Rubble land (20 percent)		0
740987 Scio (80 percent)	13	0
740988 Udifluvents, occasionally flooded (90 percent)	10	0
740991 Unadilla (85 percent)	14	0
740992 Unadilla (85 percent)	1 14	0
740995 Wellsboro, extremely stony (85 percent)	8	0
740996 Wellsboro, extremely stony (85 percent)	 8	0
741149 Lackawanna, extremely stony (85 percent)	1 10	0
741150 Lackawanna, extremely stony (85 percent)	 10	0
801114 Oquaga (75 percent)	 	0
Rock outcrop (15 percent)	 0	0
810906 Oquaga (75 percent)	 	0
Rock outcrop (15 percent)	 0	0
1147465 Alden, extremely stony (90 percent)	 	0

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name, and component percent	soc	sic
1147467	kg/m²	kg/m²
Arnot, very rocky (55 percent)		0
Lordstown, very rocky (40 percent)	7	0
1147468 Arnot (45 percent)	4	0
Lordstown (40 percent)		0
Rock outcrop (15 percent)	 0	0
1147469 Arnot (60 percent)		0
Lordstown (25 percent)	6	0
Rock outcrop (15 percent)		0
1147470 Atherton, very poorly drained (60 percent)	33	0
Atherton, poorly drained (30 percent)	16	0
1147471 Catden (85 percent)	 135	0
1147474 Chippewa, extremely stony (80 percent)		0
1147475 Colonie (80 percent)	 5	0
1147478 Delaware, rarely flooded (80 percent)	 6	0
1147482 Fredon, very stony (50 percent)	 	0
Halsey, very stony (40 percent)	13	0
1147485 Hazen, very stony (60 percent)	 	 0
Hoosic, very stony (35 percent)	 7	0
1147490	l 	
Hoosic, very stony (60 percent)		0
Hazen, very stony (30 percent)	10 	0
1147491 Hoosic, very stony (50 percent)	 7	0
Otisville, very stony (40 percent)	4	0
1147492 Lackawanna, extremely stony (85 percent)	 	0
1147500 Wurtsboro, extremely stony (90 percent)	 9	 0

Table 17.--Total Soil Carbon--Continued

	· · · · · · · · · · · · · · · · · · ·	
Map unit symbol, component name, and component percent	soc	 SIC
1147501	kg/m²	kg/m²
1147501 Wurtsboro, extremely stony (60 percent)		 0
Swartswood, extremely stony (40 percent)	7	0
1147502 Wurtsboro, extremely stony (60 percent)	 9	 0
Swartswood, extremely stony (40 percent)	7	0
1147527 Udorthents (60 percent)	18) 0
Urban land (40 percent)	0	0
1147532 Udorthents (100 percent)	 18) 0
1147533 Wurtsboro, extremely stony (80 percent)	9	0
Swartswood, extremely stony (20 percent)	7 7	0
1948749 Arnot (90 percent)	6	0
1948750 Arnot (90 percent)	6	0
1948751 Arnot (90 percent)	6	0
1948774 Conotton (90 percent)	6	 4
1948775 Conotton (95 percent)	6	 4
1948776 Conotton (95 percent)	6	 4
1948777 Conotton (95 percent)	6	 4
1948797 Manlius (90 percent)	 4) 0
1948802 Manlius (90 percent)	4	0
1948818 Manlius (90 percent)	4	0
1948832 Penargyl (90 percent)	7	0
1948846 Phelps (90 percent)	8	0
1948855 Udorthents, loamy (95 percent)	 8 8) 0

Soil Survey of Delaware Water Gap National Recreation Area

Table 17.--Total Soil Carbon--Continued

Map unit symbol, component name, and component percent	l soc	 SIC
1948989	kg/m²	kg/m²
Urban land (65 percent)	I 0 	0
Delaware (25 percent)	9	0
]]

Table 18.--Chemical Soil Properties

[Absence of an entry indicates that data were not estimated]

Map unit symbol and soil name	 Depth 	exchange		reaction	
	 	capacity 	exchange capacity 		ate
290836	In	meq/100 g	meq/100 g	pН	Pct
Hoosic, very stony	 0-1	 85.0-94.4	 31.5-36.9	I I 4.5-6.0	I I 0
noosie, very seeny	1-9	•		4.5-5.5	•
i	9-21	5.4-7.4	2.3-3.9	4.5-5.5	0
	21-27	0.6-3.6	0.0-3.2	4.5-6.0	0
		•		4.5-6.0	•
	37-49	•		4.5-6.0	•
	49-60 	0.6-3.6	0.0-3.2	4.5-6.0 	I 0
Otisville, very stony	0-1	 85.0-94.4	 31.5-36.9	4.5-6.0	0
,	1-2	5.7-9.1	2.7-9.2	3.5-6.5	0
1		•	0.0-3.2	3.5-6.5	0
		•		3.5-6.5	•
		•		3.5-6.5	•
				4.5-6.0 4.5-6.0	•
		•	•	1 4.5-6.0	•
i		İ	i	i	i
296265		1	I	!	
Alden		32.1-52.8	•	5.1-7.3	•
	9-35 35-60	6.8-21.7 6.8-18.1	 	5.6-7.3 6.1-8.4	•
	33-60 	0.6-16.1 	 	0.1-0.4 	l 0-10
296269	İ	i	i	i	i İ
Fluvents, (alluvial	l	I	I	l	l
land)	0-6	4.0-11.7		3.6-7.3	•
	6-42	3.1-13.0		3.6-7.3	•
	42-60 	9.5-21.1		4.5-6.5 	J 0
296271]	İ	i I		'
Alvira	0-10	i	2.8-5.5	3.6-5.5	0
	10-21		3.6-7.0	3.6-5.5	0
	21-60		3.6-7.0	3.6-5.5	I 0
Watson	 0-10	l 	 2.4-5.4	l 4.5-5.5	I I 0
watson	1 10-27	l	•	1 4.5-5.5	•
i	27-60			4.5-5.5	•
i		İ	ĺ	l	ĺ
296272		I		!	
Bath	0-8			4.5-6.0	•
	8-27 27-60	3.0-9.0	•	4.5-6.0 4.5-6.5	•
	60-64	1 1.0-7.0		5.1-8.4	•
i		I	i	i	İ
296273	l	I	I	l	l
Bath	0-8			4.5-6.0	
	8-27			4.5-6.0	
l l	27-60 60-64	3.0-9.0 1.0-7.0		4.5-6.5 5.1-8.4	
	00 04	1 1.0 7.0	- 	 	ı u
296274	i İ	i	i	i İ	İ
Bath	0-8		•	4.5-6.0	•
	8-27		•	4.5-6.0	•
	27-60 60-64	3.0-9.0 1.0-7.0		4.5-6.5 5.1-8.4	•
	00 04	1 1.0 7.0	- 	, J.⊥-6.4 I	ı u
	•	•	•	•	•

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	Cation- exchange capacity 		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
296275 Bath	0-8 8-27 27-60 60-64	 3.1-10.7 2.1-10.7	1.0-3.6	 4.5-6.0 4.5-6.0 4.5-6.5 5.1-8.4	0 0
296276 Bath	0-8 8-27 27-60 60-64	 3.1-10.7 2.1-10.7	1.0-3.6	 4.5-6.0 4.5-6.0 4.5-6.5 5.1-8.4	, 0 0
296277 Benson	0-8 8-18 18-22	 8.1-22.4 4.3-15.0 	 	 5.6-7.8 6.1-7.8 	•
296278 Benson	0-8 8-18 18-22	 8.1-22.4 4.3-15.0 	 	 5.6-7.8 6.1-7.8 	•
296279 Benson	0-8 8-18 18-22	 8.1-22.4 4.3-15.0 	 	 5.6-7.8 6.1-7.8 	•
296280 Braceville	0-3 3-30 30-55 55-60	 4.0-13.9 0.6-6.7	•	 4.5-6.0 4.5-6.0 5.1-6.5 5.1-6.5	0 0
296281 Braceville	0-3 3-30 30-55 55-60	 4.0-13.9 0.6-6.7	2.0-5.0	 4.5-6.0 4.5-6.0 5.1-6.5	0 0
296283 Buchanan	0-4 4-25 25-60	 	 2.4-6.9 3.6-6.0 3.6-7.0	 3.6-5.5 3.6-5.5 3.6-5.5	0
296288		1	!		l
Chippewa	8-16 16-48	8.5-22.0 10.7-24.7 5.9-19.9 5.9-19.9	 	4.5-6.5 4.5-6.5 5.1-7.3 5.6-8.4	0 1 0
Norwich	8-16 16-48	8.5-22.0 10.7-20.1 5.9-16.2 6.0-20.0	 	 5.1-6.5 5.1-6.5 5.1-7.3 5.6-8.4	0 0
296289 Chippewa	8-16 16-48	 8.5-22.0 10.7-24.7 5.9-19.9 5.9-19.9	I	4.5-6.5 4.5-6.5 5.1-7.3 5.6-8.4	0 1 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	Cation- exchange capacity 		reaction	 Calcium carbon- ate
296289	In	meq/100 g	meq/100 g	 pH	 Pct
Norwich		8.5-22.0 10.7-20.1 5.9-16.2 6.0-20.0	 	5.1-6.5 5.1-6.5 5.1-7.3 5.6-8.4	I 0 I 0
296295 Udorthents, cut and fill.		 	 	 	
296297 Dekalb	0-7 7-24 24-32 32-36	 	3.5-7.0 1.4-3.6 1.0-3.0	3.6-6.5 3.6-5.5 3.6-5.5	•
296298 Dekalb	0-7 7-24 24-32 32-36	 	 3.5-7.0 1.4-3.6 1.0-3.0 	 3.6-6.5 3.6-5.5 3.6-5.5	 0 0 0
296303 Hazleton	0-5 5-31 31-58 58-69	 	 2.9-6.6 1.4-3.6 1.0-3.0 	 3.6-5.5 3.6-5.5 3.6-5.5 	•
296304				! ! 4 - 4	
Holly	8-28 28-41	11.7-21.0 9.5-20.3 5.7-18.5 0.0-19.6	 	5.6-7.3 5.1-7.3 5.6-7.8 5.6-7.8	0 0
296311 Lackawanna	0-8 8-25 25-60	 	•	4.5-5.5 4.5-5.5 4.5-6.0	I 0
Bath	0-8 8-27 27-60 60-64	 3.1-10.0 2.1-10.0	1.0-3.6 	4.5-6.0 4.5-6.0 4.5-6.5 5.1-8.4	, 0 0
296312 Lackawanna	0-8 8-25 25-60	 		 4.5-5.5 4.5-5.5 4.5-6.0	0
296313 Lackawanna	0-8 8-25 25-60	 	1.0-3.6	 4.5-5.5 4.5-5.5 4.5-6.0	0
296315 Lackawanna	0-8 8-25 25-60	 	1.0-3.6	 4.5-5.5 4.5-5.5 4.5-6.0	0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
296316 Lackawanna	 0-8 8-25 25-60	 		 4.5-5.5 4.5-5.5 4.5-6.0	0
296317 Laidig	0-6 6-33 33-65	 	•	 3.6-5.5 3.6-5.5 3.6-5.5	'
296326 Lordstown	0-7 7-26 26-30 30-42	 4.0-12.0	3.6-7.0 3.6-7.0 3.6-7.0 		 0 0 0
296327 Lordstown	0-7 7-26 26-30 30-42	 4.0-12.0	 3.6-7.0 3.6-7.0 		 0 0 0 0
296328 Lordstown	0-7 7-26 26-30 30-42	 6.2-14.9 2.5-11.7 	 1.0-5.2 		 0 0 0
Oquaga	0-7 7-30 30-42	 	 1.4-5.4 1.4-5.4 		 0 0 0
296329 Mardin	0-8 8-17 17-21 21-60 60-80	 7.0-14.0 5.0-13.0		 4.5-6.0 3.6-6.5 3.6-6.5 4.5-7.3 5.1-8.4	0 0 0
296330	<u> </u>	 	 	 	l I
Mardin		 7.0-14.0 5.0-13.0	2.0-3.6 	4.5-6.0 3.6-6.5 3.6-6.5 4.5-7.3 5.1-8.4	, 0 0
296331		į	 	!	į
	17-21 21-60	5.0-12.0	2.0-4.4	4.5-5.5 3.6-6.5 3.6-6.5 4.5-7.3 5.1-8.4	0 0 0
	17-21 21-60 60-80	5.0-12.0 5.0-12.0	2.0-4.4 2.0-4.4 	 4.5-5.5 3.6-6.5 3.6-6.5 4.5-7.3 5.1-8.4	0 0 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	 Pct
296335 Meckesville	 0-9 9-36	•		 3.6-5.5 3.6-5.5	•
	36-60 60-64	•	3.6-7.0	3.6-5.5	i 0
296337 Meckesville	 0-9	 	 2.8-8.4	 3.6-5.5	 0
Meckesviile	9-36	•		3.6-5.5	•
	36-60 60-64	 		3.6-5.5	•
296338		! 	! 	! 	!
Morris	0-8 8-17	 5.9-21.2		4.5-6.0 4.5-6.5	
	17-70 70-80	5.4-16.4 4.3-15.0	 	4.5-6.5	
296339	 	I 	 	l 	
Morris	0-8 8-17			4.5-6.0 4.5-6.0	
	17-70 70-80	7.4-17.3	i !	4.5-6.5 4.5-6.5	
296340 Morris	 0-8	 	I 3.0-5.0	 4.5-6.0	I I I 0
HOILIS	8-17		3.0-5.0	4.5-6.0	i o
	17-70 70-80	7.4-17.3 7.4-17.3	 	4.5-6.5 4.5-6.5	
296341	 0-6	 30.0-80.0	 37.5-74.3	' 3.6-4.4	 0
Freetown, mucky peat-		•	• • • • • • • • • • • •	3.6-4.4 3.6-4.4	
296342 Paupack, mucky peat			i i	' 	
(shallow)		150.0-230.0		3.2-4.2	0
		150.0-230.0 20.0-40.0	•	3.2-4.2 4.0-5.5	•
	36-70 	2.0-20.0 	1.0-5.1 	4.0-5.5 	0
296343	 0-7	 	 2.9-9.9	 3.6-6.0	 0
Oquaga	7-30		1.4-5.4	3.6-6.0	0
	30-42 	 	 	 	0
Lackawanna	0-8 8-25			4.5-5.5 4.5-5.5	
	25-60	 		4.5-6.0	0
296344	 0-7	!	 2 0_0 0	 3.6-6.0	!
Oquaga	7-30		1.4-5.4	3.6-6.0	0
	30-42 	 	 	 	0
Lackawanna	0-8 8-25	•		4.5-5.5 4.5-5.5	
	25-60	•		4.5-6.0	
	l	I	I	I	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
296346 Oquaga	 0-7 7-30 30-42	 	 1.4-5.4 1.4-5.4 	 3.6-6.0 3.6-6.0 	 0 0 0
Lackawanna	 0-8 8-25 25-60	 	 2.0-5.4 1.0-3.6 1.0-3.6	 4.5-5.5 4.5-5.5 4.5-6.0	•
296347	 	1	! 	 	!
Oquaga	0-7 7-30 30-42	 	1.4-5.4 1.4-5.4 	3.6-6.0 3.6-6.0 	0 0 0
Lackawanna	0-8 8-25 25-60	 	2.0-5.4 1.0-3.6 1.0-3.6	4.5-5.5 4.5-5.5 4.5-6.0	
296348 Philo	 0-10 10-40 40-60	 	 3.5-6.6 2.0-3.6 1.0-3.6	 4.5-6.0 4.5-6.0 4.5-6.0	
296349 Pope	 0-10 10-30 30-60	 	 1.8-6.0 1.0-3.6 1.0-4.0	 3.6-5.5 3.6-5.5 3.6-5.5	•
296350 Pope	 0-10 10-30 30-60	 	 1.8-6.0 1.0-3.6 1.0-4.0	 3.6-5.5 3.6-5.5 3.6-5.5	
296351 Rexford, somewhat poorly drained	 0-8 8-18 18-40	 5.9-14.1 5.4-10.9	 2.8-6.3 	 4.5-6.0 5.1-6.5 5.1-6.5	0
Rexford, poorly drained		2.5-9.5 5.9-14.1 5.4-10.9 2.5-9.5	i	5.1-6.5 4.5-6.0 5.1-6.5 5.1-6.5	i 0 I 0
296355 Sheffield	7-19	 8.0-19.9 13.8-18.7 8.7-17.3		 4.5-5.5 5.1-6.0 5.6-7.3 6.6-8.4	I 0 I 0
296363 Dystrochrepts, very stony	 0-6 6-32 32-56 56-60	 		 3.6-5.5 3.6-5.5 3.6-5.5 	0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
296369 Wayland	 0-9 9-41 41-60	 12.4-27.3 9.5-23.2 8.1-17.3	 	 5.1-7.8 5.1-8.4 5.6-8.4	 0 0 0
296376	 	1	! 	 	!
Wellsboro	0-8 8-17 17-21 21-60 60-80	 			0 0 0 0 0
296379		į	i		į
Wellsboro	0-8 8-17 17-21 21-60 60-80	i	•	4.5-5.5 4.5-6.0 4.5-6.0 4.5-6.0 4.5-6.0	0 0 0 0
296385	l 	l I	 	l 	!
Wyoming	0-7 7-25 25-60	 	3.1-6.6 1.0-3.0 0.2-2.2	3.6-6.0 3.6-6.0 3.6-6.0	0 0 0
296386 Wyoming	0-7 7-25 25-60	i 	3.1-6.6 1.0-3.0 0.2-2.2	3.6-6.0 3.6-6.0 3.6-6.0	 0 0
296387	 	 	 	 	
Wyoming	0-7 7-25 25-60	 	3.1-6.6 1.0-3.0 0.2-2.2	3.6-6.0 3.6-6.0 3.6-6.0	0 0 0
296388 Wyoming	 0-7 7-25 25-60	 	 3.1-6.6 1.0-3.0 0.2-2.2	3.6-6.0 3.6-6.0 3.6-6.0	
296389	 	 	 	l İ	
Wyoming	0-8 8-26 26-60	 	3.1-6.6 1.0-3.0 0.2-2.2	3.6-6.0 3.6-6.0 3.6-6.0	0 0 0
297185 Edgemere	2-5	5.0-10.0	3.1-9.0	 4.0-5.5 4.0-5.5 4.0-5.5	, j 0
				4.0-5.5	0
Shohola	3-24	5.0-10.0	1.6-3.4	3.5-5.0 4.5-5.0 4.5-5.5	0
297186 Edgemere	2-5 5-24	5.0-10.0 5.0-10.0	3.1-9.0 1.6-3.8 1.6-4.4	 4.0-5.5 4.0-5.5 4.0-5.5 4.0-5.5	I 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
0.051.00	In	meq/100 g	meq/100 g	рН	Pct
297188 Manlius	 0-5 5-24 24-30 30-40	 10.0-23.0 3.0-13.0 2.0-9.0 	2.7-9.6 1.2-4.4 1.0-3.0	3.5-6.0 3.5-6.0 4.5-6.5	0
Arnot		 15.0-25.0 10.0-20.0 	3.9-8.1 1.6-4.0 	3.6-6.0 3.6-6.0 	•
297189	İ	İ	İ		İ
Manlius	0-5 5-24 24-30 30-40	10.0-23.0 3.0-13.0 2.0-9.0 	2.7-9.6 1.2-4.4 1.0-3.0 	3.5-6.0 3.5-6.0 4.5-6.5	0
Arnot		•	3.9-8.1 1.6-4.0 0.0-0.0	3.6-6.0 3.6-6.0 	•
297190 Braceville	 0-11 11-27 27-48 48-70	3.0-6.0	1.0-2.0 1.0-3.0	4.5-6.0 4.5-6.0 5.1-6.5 5.1-6.5	0 0
297191 Wyalusing	 0-6 6-31 31-70	 15.0-25.0 5.0-12.0 0.0-5.0	2.0-7.0	5.1-6.5 5.1-6.5 5.1-6.5	0
297192 Pope	 0-6 6-33 33-70	 10.0-20.0 5.0-15.0 5.0-15.0	•	3.6-5.5 3.6-5.5 3.6-5.5	0
297193		, 	i		
Paupack	3-26 26-36	•	22.5-37.5 1.5-7.5	3.2-4.2 3.2-4.2 4.0-5.5 4.0-5.5	I 0 I 0
297196 Freetown				3.6-4.4 3.6-4.4	
297197 Manlius			1.2-4.4	3.5-6.0 3.5-6.0 4.5-6.5	0
297198 Manlius	 0-5 5-24 24-30 30-40	 12.0-25.0 3.0-13.0 2.0-9.0 	•	3.5-6.0 3.5-6.0 4.5-6.5	0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 		reaction	 Calcium carbon- ate
	' In	meq/100 g	meq/100 g	 pH	 Pct
297201 Oquaga	 0-2 2-26 26-32 32-42	 15.0-25.0 15.0-20.0 15.0-20.0 	 2.9-11.4 1.4-6.9 1.4-6.9 	 3.6-6.0 3.6-6.0 3.6-6.0	 0 0 0
297203	 		1	 	 -
Delaware	0-14 14-48 48-72	5.0-10.0 3.0-6.0 3.0-6.0	4.0-9.0 1.0-3.0 1.0-3.0	5.1-7.3 5.1-7.3 5.6-7.3	•
297204 Delaware	 0-14 14-48 48-72	 5.0-10.0 3.0-6.0 3.0-6.0	4.0-9.0 1.0-3.0 1.0-3.0	 5.1-7.3 5.1-7.3 5.6-7.3	0
297205	 	1	I 	I 	I I
Delaware	0-14 14-48 48-72	5.0-10.0 3.0-6.0 3.0-6.0	4.0-9.0 1.0-3.0 1.0-3.0	5.1-7.3 5.1-7.3 5.6-7.3	
297209 Philo	 0-6 6-36 36-70	 10.0-20.0 6.0-18.0 4.0-10.0	3.5-6.6 2.0-4.0	 4.5-6.0 4.5-6.0 4.5-6.0	0
297210	 	1] 	 	
Barbour	0-10 10-38 38-72	10.0-15.0 5.0-10.0 5.0-10.0	2.0-7.4 1.2-4.0 0.5-2.0	4.5-6.0 4.5-6.0 4.5-6.5	0 0 0
297216 Wurtsboro	 0-4 4-22 22-70	 15.0-35.0 2.0-8.0 0.0-1.0	3.5-6.6 2.0-4.0 2.0-3.6	3.6-5.5 3.6-5.5 3.6-5.5	 0 0 0
297217 Wurtsboro	 0-4 4-22 22-70	 15.0-35.0 2.0-8.0 0.0-1.0	 2.5-6.6 1.0-4.0 1.0-4.0	 3.6-5.5 3.6-5.5 3.6-5.5	
297227	 	 	<u> </u>	 	
Arnot	3-10	3.0-13.0	1.6-5.1	3.6-6.0 3.6-6.0 3.6-6.0 	0
297228	İ	i	İ	İ	i
Arnot	3-10	3.0-13.0	1.6-5.1	3.6-6.0 3.6-6.0 3.6-6.0 	0
297229 Wyoming	3-33	5.0-10.0	1.0-3.4	 3.6-6.0 3.6-6.0 3.6-6.0	0
297230 Wyoming	3-33	5.0-10.0	1.0-3.4	 3.6-6.0 3.6-6.0 3.6-6.0	0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 		reaction	 Calcium carbon- ate
	 In	meq/100 g	meq/100 g	pH	Pct
297231	l				l
Wyoming	0-3 3-33	10.0-20.0 5.0-10.0	3.1-6.6 1.0-3.4	3.6-6.0 3.6-6.0	l 0 l 0
	33-72	1 1.0-5.0	0.2-2.6	3.6-6.0	0
297236	 	 		 	
Suncook	0-10	5.0-15.0	4.0-9.0	4.5-6.5	0
	10-70 	1.0-3.0	0.3-1.0	4.5-6.5 	I 0
297237	i	i		İ	İ
Mardin	0-8	12.0-25.0	4.3-8.9	3.6-6.5	1 0
	8-17 17-21	5.0-12.0 5.0-12.0	2.0-4.4	3.6-6.5 3.6-6.5	•
	17-21	I 3.0-12.0	2.0-4.0	1 4.5-7.3	•
	30-60	3.0-9.0	2.0-4.0	5.1-8.4	•
	60-80	3.0-9.0	2.0-4.0	5.1-8.4	0
297238	! 	i I		l 	
Mardin	l 0-8	12.0-25.0	4.3-8.9	3.6-6.5	0
	8-17	5.0-12.0	2.0-4.4	3.6-6.5	•
	17-21 21-30	5.0-12.0 3.0-10.0	2.0-4.4	3.6-6.5 4.5-7.3	•
	I 30-60	3.0-9.0	2.0-4.0	5.1-8.4	•
	60-80	3.0-9.0	2.0-4.0	5.1-8.4	0
297239	 	I 		 	
Mardin		15.0-25.0	4.3-8.9	3.6-6.5	0
	8-17	5.0-12.0	2.0-4.4	3.6-6.5	•
	17-21 21-30	5.0-12.0 3.0-10.0	2.0-4.4 2.0-4.0	3.6-6.5 4.5-7.3	•
	30-60	3.0-9.0	2.0-4.0	5.1-8.4	•
	60-80	3.0-9.0	2.0-4.0	5.1-8.4	I 0
297240	 	! 		 	
Mardin	0-8	15.0-25.0	4.3-8.9	3.6-6.5	0
	8-17	5.0-12.0	2.0-4.4	3.6-6.5	•
	17-21 21-30	5.0-12.0 3.0-10.0	2.0-4.4	3.6-6.5 4.5-7.3	•
	I 30-60	1 3.0-9.0	2.0-4.0	5.1-8.4	1 0
	60-80	3.0-9.0	2.0-4.0	5.1-8.4	0
297241	 	I I		 	
Unadilla		12.0-28.0		4.5-6.0	0
	•	3.0-8.0		4.5-6.0	
	49-80 	2.0-5.0 	0.2-1.8 	4.5-6.0 	I 0 I
297242	l				ĺ
Shohola		•		3.5-5.0 4.5-5.0	
				4.5-5.5	•
Edgemere	 0-2	 15.0-30.0	 3 0-15 0	 4.0-5.5	I I 0
nagemere				4.0-5.5	
				4.0-5.5	
	24-66	5.0-10.0	1.6-4.4	4.0-5.5	0
297243	 	! 		 	!
Shohola		5.0-15.0		3.5-5.0	
				4.5-5.0	
	24-72 	0.0-5.0 	1.6-3.4 	4.5-5.5) 0 I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	Cation- cxchange capacity		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
297243 Edgemere	 0-2 2-5 5-24 24-66	 15.0-30.0 5.0-10.0 5.0-10.0 5.0-10.0	•	 4.0-5.5 4.0-5.5 4.0-5.5 4.0-5.5	, 0 0
	l	Į.	ļ.	l	Į.
297244 Lordstown	 0-3 3-28 28-30 30-40	 15.0-25.0 15.0-25.0 5.0-15.0 	 7.0-17.0 1.4-6.0 1.0-4.0 	 4.5-6.5 4.5-6.0 4.5-6.0 	
Swartswood	0-4 4-32 32-70	15.0-35.0 3.0-10.0 3.0-10.0	6.2-11.5 2.0-4.8 1.6-4.4	3.6-5.5 3.6-5.5 3.6-5.5	i 0
297247 Chenango	 0-10 10-29 29-70	 20.0-35.0 10.0-20.0 3.0-8.0	 2.5-6.9 1.0-3.2 0.5-3.0	 4.5-6.0 4.5-6.0 5.1-7.8	•
297248 Chenango	 0-10 10-29 29-70	 20.0-35.0 10.0-20.0 3.0-8.0	 2.5-6.9 1.0-3.2 0.5-3.0	 4.5-6.0 4.5-6.0 5.1-7.8	i o
297249	 	! 	! !	I 	!
Chenango	0-10 10-29 29-70	20.0-35.0 10.0-20.0 3.0-8.0	2.5-6.9 1.0-3.2 0.5-3.0	4.5-6.0 4.5-6.0 5.1-7.8	i o
297253 Craigsville	 0-5 5-27 27-77	 10.0-15.0 5.0-10.0 5.0-10.0	 2.5-6.8 1.0-3.4 1.0-2.4	 4.5-5.5 4.5-5.5 4.5-5.5	•
Wyoming	 0-3 3-33 33-72	10.0-15.0 5.0-10.0 1.0-5.0	3.1-6.6 1.0-3.4 0.2-2.6	3.6-6.0 3.6-6.0 3.6-6.0	i o
	0-2 2-3 3-5 5-6 6-18 18-24 24-30	5.9-13.4 2.3-4.4 7.8-14.8 2.3-6.5 2.3-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.1-5.7 0.0-2.3	 4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0
	0-2 2-3 3-4 4-6 6-18 18-24 24-33 33-60	5.9-13.4 2.3-4.4 7.8-14.8 2.3-6.5 2.3-6.5 1.2-4.3 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.1-5.7 0.0-2.3 0.0-2.3	 4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- cxchange capacity		reaction	 Calcium carbon- ate
298050	 In 	meq/100 g	meq/100 g	pH	 Pct
Swartswood, extremely stony	1-2 2-3 3-4 4-21 21-32	5.9-13.4 2.3-5.0 7.8-14.8 2.3-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0
298051 Wurtsboro, extremely stony	2-3 3-4 4-6 6-18 18-24 24-33	5.9-13.4 2.3-4.4 7.8-14.8 2.3-6.5 2.3-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.1-5.7 0.0-2.3	 4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0
Swartswood, extremely stony	1-2 2-3 3-4 4-21 21-32	5.9-13.4 2.3-5.0 7.8-14.8 2.3-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0
298075 Colonie	 0-2 2-11 11-24 24-40 40-62	 3.5-7.7 3.5-7.7 0.6-3.8 0.6-3.8 0.6-3.8	0.0-3.3 0.0-8.7 0.0-8.7	 5.1-6.5 5.1-6.5 5.1-6.5 5.1-7.3 5.1-7.3	0 0 0
298188 Lackawanna, extremely stony	2-3 3-7 7-8 8-16 16-24	5.9-13.4 2.3-4.4 7.8-14.8 4.6-6.5 4.6-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-20.0 0.1-5.7 0.1-5.7 0.0-2.3	 4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0
Lackawanna, extremely stony	2-3 3-7 7-8 8-16 16-24 24-29	5.9-13.4 2.3-4.4 7.8-14.8 4.6-6.5 4.6-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-20.0 0.1-5.7 0.1-5.7 0.0-2.3	 4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	PH	Pct
298221	!	!	!	!	!
Swartswood, extremely stony	 0-1	I 185.0-94.4	 31.5-36.9	I I 4.5-6.0	I I 0
excremery scony	l 1-2	5.9-13.4	3.1-11.1	1 3.5-5.5	' -
	2-3	2.3-5.0	1.1-1.8	3.5-5.5	, j 0
	3-4		3.6-5.9	3.5-5.5	0
	4-21	2.3-6.5	0.1-5.7	3.5-5.5	•
	21-32 32-60	1.2-4.3 1.2-4.3	0.0-2.3 0.0-2.3	3.5-5.5 3.5-5.5	•
298222 Swartswood,	 	 	 	 	
extremely stony	0-1	85.0-94.4	31.5-36.9	4.5-6.0	0
	1-2	5.9-13.4	3.1-11.1	3.5-5.5	0
	2-3	2.3-5.0	1.1-1.8	3.5-5.5	•
	3-4 4-21		3.6-5.9 0.1-5.7	3.5-5.5 3.5-5.5	'
	21-32	1.2-4.3	0.0-2.3	1 3.5-5.5	•
	32-60	1.2-4.3	0.0-2.3	3.5-5.5	i 0
298223	! 	! 	! 	! 	!
Swartswood,					1
extremely stony	0-1 1-2	85.0-94.4 5.9-13.4	31.5-36.9 3.1-11.1	4.5-6.0 3.5-5.5	
	1 2-3	1 2.3-5.0	1 1.1-1.8	1 3.5-5.5	•
	3-4	7.8-14.8	3.6-5.9	3.5-5.5	, j 0
	4-21	2.3-6.5	0.1-5.7	3.5-5.5	•
	21-32 32-60	1.2-4.3 1.2-4.3	0.0-2.3 0.0-2.3	3.5-5.5 3.5-5.5	•
298255	 	 	 	 	
Delaware, rarely	i i	i	i	i	i İ
flooded	0-1	85.0-94.4	31.5-36.9	5.1-6.5	0
	1-4			5.1-6.5	•
	4-11 11-20	3.4-12.6 2.2-7.0		5.1-6.5 5.1-6.5	•
	11-20 20-33			5.1-6.5 5.1-6.5	'
	33-41	2.2-7.0	0.3-4.1	5.1-6.5	
	41-56	1.3-3.7		5.1-6.5	•
	56-60 	1.3-3.7 	1.0-4.2 	5.1-6.5 	0
298256	İ	İ	İ	İ	İ
Delaware, rarely flooded	I I 0-1	 85.0-94.4	 31.5-36.9	 5.1-6.5	I I 0
	•			5.1-6.5	
	4-11	3.4-12.6	0.3-9.3	5.1-6.5	0
	•	•		5.1-6.5	
	•	•		5.1-6.5 5.1-6.5	
	•	•	•	5.1-6.5	
	•	•	•	5.1-6.5	
298257	 	 	 	 	I I
Wallpack	0-3			5.1-6.5	
	3-9			5.1-6.5	
	9-16 16-25	•		5.1-6.5 5.6-7.3	
	25-65	•	•	5.6-7.8	•
	I	I	I	I	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 		reaction	 Calcium carbon- ate
	 In	meq/100 g	meq/100 g	' pH	 Pct
298258 Wallpack	 0-3 3-9 9-16 16-25 25-65	3.5-11.4 1.7-15.4 1.2-8.8	3.1-5.4 1.3-4.8 0.6-5.3	 5.1-6.5 5.1-6.5 5.1-6.5 5.6-7.3 5.6-7.8	0 0 0
298259	 	 	 	 	
Wallpack, extremely stony	5-18 18-24 24-42	8.0-35.0 6.0-9.4 1.7-15.4 1.2-8.8 1.2-8.8	6.0-20.0 0.0-3.9 1.3-4.8 0.6-5.3 0.6-5.3	4.5-6.0 5.1-6.5 5.1-6.5 5.1-6.5 5.6-7.3 5.6-7.3	0 0 0 0
298260	 	 	 	 	
Wallpack, extremely stony	1-2 2-5 5-18 18-24 24-42	8.0-35.0 6.0-9.4 1.7-15.4 1.2-8.8 1.2-8.8	6.0-20.0 0.0-3.9 1.3-4.8 0.6-5.3	 4.5-6.0 5.1-6.5 5.1-6.5 5.1-6.5 5.6-7.3 5.6-7.3	0 0 0 0
298261 Wallpack	 0-3 3-9 9-16 16-25 25-65	3.5-11.4 1.7-15.4	3.1-5.4 1.3-4.8	 5.1-6.5 5.1-6.5 5.1-6.5 5.6-7.3 5.6-7.8	0 0 0
298262 Wallpack, extremely stony	1-2 2-5	8.0-35.0 6.0-9.4 1.7-15.4	6.0-20.0 0.0-3.9 1.3-4.8 0.6-5.3	 4.5-6.0 5.1-6.5 5.1-6.5 5.1-6.5 5.6-7.3 5.6-7.3	0 0 0 0
298265	 	! 	 	l İ	
Venango, extremely stony	1-6 6-16 16-22 22-34	10.9-15.1 4.6-9.0 3.5-9.0 3.5-9.0	4.4-11.1 0.4-12.3 0.0-12.3 0.0-12.3	4.5-6.0 3.5-6.0 3.5-6.0 4.5-6.5 4.5-6.5	0 0 0 0
298266 Venango, extremely stony	1-6 6-16 16-22 22-34	10.9-15.1 4.6-9.0 3.5-9.0 3.5-9.0	4.4-11.1 0.4-12.3 0.0-12.3 0.0-12.3	 4.5-6.0 3.5-6.0 3.5-6.0 4.5-6.5 4.5-6.5	0 0 0 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	Cation- cxchange capacity		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
298409		!	!		!
Swartswood, extremely stony	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I I 0
excremery scory		•	•	3.5-5.5	•
i	2-3	2.3-5.0		3.5-5.5	
I				3.5-5.5	
			•	3.5-5.5	•
			0.0-2.3 0.0-2.3	3.5-5.5 3.5-5.5	
298411	 	 	 	 	
Swartswood,				1	I
extremely stony			•	4.5-6.0 3.5-5.5	•
				3.5-5.5	
i				3.5-5.5	
į			•	3.5-5.5	•
			0.0-2.3 0.0-2.3	3.5-5.5 3.5-5.5	
298413] 	
Swartswood,		i	i i	i	İ
extremely stony		85.0-94.4	•	4.5-6.0	•
				3.5-5.5	
		•		3.5-5.5 3.5-5.5	
	_	•		3.5-5.5	
i		•		3.5-5.5	•
	32-60	1.2-4.3	0.0-2.3	3.5-5.5	J 0
318498	<u> </u> 	i	İ		İ
Hazen, very stony	0-1	•		4.5-6.0	
			•	5.6-6.5	•
				5.6-6.5 6.1-7.8	
		•		6.1-7.8	
		•		6.1-7.8	
Hoosic, very stony		•		4.5-6.0	
				4.5-5.5	
				4.5-5.5 4.5-6.0	
				4.5-6.0	
i				4.5-6.0	
	49-60 	0.6-3.6 	0.0-3.2 	4.5-6.0	I 0
318533	0.1	 85.0-94.4	 31.5-36.9	 4.5-6.0	
Hazen, very stony				5.6-6.5	
i		•	•	5.6-6.5	
	18-29			6.1-7.8	
		•	•	6.1-7.8	•
	41-60 	0.6-3.6 	0.0-3.2 	6.1-7.8 	0
Hoosic, very stony				4.5-6.0	
				4.5-5.5	
				4.5-5.5 4.5-6.0	
				4.5-6.0	
i	37-49	0.6-3.6	0.0-3.2	4.5-6.0	0
	49-60	0.6-3.6	0.0-3.2	4.5-6.0	1 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pН	Pct
319783 Catden	2-13	 102.1-146.7 102.1-146.7 102.1-146.7	l	 4.5-7.3 4.5-7.3 4.5-7.3	0
	20-32	102.1-146.7 102.1-146.7 102.1-146.7		4.5-7.3	0
319784	 	 	 	 	
Fredon, very stony	0-1 1-8	•	•	4.5-6.0 5.1-7.3	•
				5.1-7.3 5.1-7.3	
				5.1-7.3	
	23-31			5.6-8.4	
			•	5.6-8.4	•
	36-45 45-55		•	5.6-8.4 5.6-8.4	•
		•	•	5.6-8.4	•
Halsey, very stony	 0-1 1-5	•		 4.5-6.0 5.1-7.3	
	•		•	5.1-7.3	•
				5.1-7.3	
	20-25	0.6-3.6	0.0-3.2	5.6-8.4	0
		•	•	5.6-8.4	•
	35-49	•	•	5.6-8.4	•
	49-56 56-60	0.6-3.6	•	5.6-8.4 5.6-8.4	•
543222	 	 	 	 	
Andover, extremely		1		1	l .
stony	0-8 8-17		•	4.2-6.2 4.5-5.5	0 0
	17-53		•	4.5-5.5	•
	53-65		5.7-21.0	4.5-5.5	
Buchanan, extremely		į			
stony	0-6 6-23		1.7-4.9 3.5-7.2	3.6-5.5 3.6-5.5	0 0
	1 23-47		•	3.6-5.5 3.6-5.5	
	47-61		•	3.6-5.5	•
543243	i	i	İ	İ	İ
Berks				4.2-6.6	
	10-26 26-33		•	3.6-6.5 3.6-6.5	•
	33-43				0
Weikert	I I 0-8			 4.5-6.0	
	8-15		•	4.5-6.0	•
	15-18 18-20		4.6-13.4	4.5-6.0 	0 0
543246	 	 	 	 	
Buchanan	0-7	3.7-9.9		4.0-6.0	
	7-21	!		3.5-5.5	
	21-65 	 	3.1-7.7 	3.5-5.5 	0

Table 18.--Chemical Soil Properties--Continued

			 I		
Map unit symbol and soil name	Depth	Cation- exchange capacity	•	reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
543247		Į	!	<u> </u>	!
Buchanan, extremely stony	l I 0-3	I I 3.7-9.9	l I	l l 4.0-6.0	I I 0
Scony	3-21	3.7 9.9	ı I 2.9-7.7	1 3.5-5.5	1 0
	21-65	i	3.1-7.7	3.5-5.5	, , 0
		I	I	l	I
543257		 18.0-35.0	<u> </u>		1
Chippewa	0-8 8-16	5.0-35.0 5.0-16.0	 	4.5-6.5 4.5-6.5	I 0 I 0
	16-48	5.0-12.0		5.1-7.3	
	48-80	2.0-11.0		5.6-8.4	0-5
		I	I	I	I
543258	l I 0-8	 18.0-35.0		 4.5-6.5	I I 0
Chippewa	0-8 8-16	5.0-16.0	 	4.5-6.5 4.5-6.5	•
	16-48	5.0-12.0		5.1-7.3	
	48-80	2.0-11.0		5.6-8.4	0-5
		I	I	I	I
543259		!	<u> </u>	<u> </u>	!
Chippewa, extremely stony	I I 0-8	 18.0-35.0	l I	I I 4.5-6.5	I I 0
scony	8-16	5.0-16.0	' 	1 4.5-6.5	1 0
	16-48	5.0-12.0		5.1-7.3	,
	48-80	2.0-11.0	l	5.6-8.4	0-5
E 400E4]	!	!	!	!
543271 Delaware	 0-10	 5.0-10.0	l 	 5.1-7.3	I I 0
Delaware	0-10 10-40	1 3.0-10.0	 	5.1-7.3	1 0
	40-87	3.0-6.0		5.6-7.3	0
	l	1	I	I	I
543276	1 0 6				1
Fluvaquents	0-6 6-62	2.0-10.0 2.0-15.0	1.8-8.4 	3.5-7.3 4.5-7.3	I 0 I 0
	1 0 02	1	i I	4.5 /.5 	l
543292	ĺ	i	İ	İ	İ
Hazleton, extremely		I	I	l	I
stony	0-6	!	1.5-4.9	4.2-6.6	1 0
	6-43 43-55		1.9-8.4 1.3-6.8	3.6-5.5 3.6-5.5	I 0 I 0
	43-33 55-80		1.3-0.6 	3.6-5.5 	1 0
		i	i	i	İ
543293		I	I	l	I
Hazleton, extremely	1	!		1	1
stony	0-6 6-43			4.2-6.6 3.6-5.5	
	1 43-60	l	1.3-6.8	3.6-5.5 3.6-5.5	•
	60-80	i			0
	l	I	I	l	I
543299		Į	!	<u> </u>	!
Laidig, extremely stony	l l 0-3	I I	 1.5-7.8	l 4.2-6.6	I I 0
Scony	3-38	i	5.7-18.1	1 3.6-5.5	•
	38-62	i	5.7-18.1	3.6-5.5	•
	l	1	I	l	I
543300		!	l ·		ļ.
Laidig, extremely stony	l I 0-3	I I	 1.5-7.8	 4.2-6.6	I I 0
5 cony	1 3-38			4.2-6.6 3.6-5.5	
	38-62	i	•	3.6-5.5	•
		1	I	I	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth		Effective cation- exchange capacity	reaction	Calcium carbon- ate
	<u>In</u>	 meq/100 g	meq/100 g	 <i>pH</i>	 Pct
543304 Laidig	0-3 3-38 38-62	 	5.7-18.1	 4.2-6.6 3.6-5.5 3.6-5.5	0
543327 Swartswood	11-34	 10.0-25.0 3.0-10.0 3.0-10.0	•	 4.2-6.6 3.6-5.5 3.6-5.5	0
543328 Swartswood	11-34	 10.0-25.0 3.0-10.0 3.0-10.0	2.0-4.4	 4.2-6.6 3.6-5.5 3.6-5.5	0
543330 Swartswood, extremely stony	11-34	 15.0-35.0 3.0-10.0 3.0-10.0	2.0-4.8	 4.2-6.6 3.6-5.5 3.6-5.5	0
Wurtsboro, extremely stony		 	2.0-8.0	 4.2-6.6 3.6-5.5 3.6-5.5	0
543331 Swartswood, extremely stony	0-11 11-34 34-47	 15.0-35.0 3.0-10.0 3.0-10.0		 4.2-6.6 3.6-5.5 3.6-5.5	0
Wurtsboro, extremely stony	0-10 10-20	i	2.0-8.0	 4.2-6.6 3.6-5.5	0
543359 Volusia	8-15 15-70	 12.0-25.0 5.0-12.0 3.0-10.0 3.0-9.0	 	3.6-5.5 4.5-6.5 4.5-6.5 5.1-7.3 5.6-8.4	
543360 Volusia, extremely stony	8-15 15-70	 	i	 	0 0
543374 Wurtsboro	10-20	 15.0-30.0 2.0-8.0 2.0-8.0	•	 - 4.2-6.6 3.6-5.5 3.6-5.5	0
543375 Wurtsboro	10-20	 15.0-30.0 2.0-8.0 2.0-8.0	•	 4.2-6.6 3.6-5.5 3.6-5.5	0

Table 18.--Chemical Soil Properties--Continued

			1	 	
Map unit symbol	Depth	Cation-	Effective	•	Calcium
and soil name		exchange		reaction	
		capacity			l ate
		1	capacity	 	
	In	meq/100 g	meq/100 g	pH	Pct
612280	l I 0-6	 8.3-10.2	l 6.6-8.7	l I 3.5-6.0	l I 0
Scio	0-6 6-13	•		1 3.5-6.0 1 3.5-6.0	•
	13-23	•	•	3.5-6.0	•
	23-28			3.5-6.0	
	28-50	•	4.6-10.2	3.5-6.0	•
	50-59	:	:	5.1-7.8	•
	59-72	8.7-11.5	6.1-11.5	5.1-7.8	•
612666		1	 	 	
Colonie	0-2	3.5-7.7	0.0-3.3	5.1-6.5	0
	2-11	3.5-7.7	0.0-3.3	5.1-6.5	J 0
	11-24	0.6-3.8	0.0-8.7	5.1-6.5	0
	24-40	0.6-3.8	•	5.1-7.3	•
	40-62	0.6-3.8	0.0-8.7	5.1-7.3	J 0
612668			İ	! 	!
Hoosic, very stony		•	•	4.5-6.0	1 0
	1-9	•	•	4.5-5.5	•
	9-21			4.5-5.5	•
	21-27	•		4.5-6.0	•
	27-37	0.6-3.6	0.0-3.2	4.5-6.0	•
	37-49 49-60	0.6-3.6	0.0-3.2	4.5-6.0	•
	49-60 	0.6-3.6 	0.0-3.2 	4.5-6.0 	I 0 I
Hazen, very stony	0-1	85.0-94.4	31.5-36.9	4.5-6.0	0
	1-10	5.9-9.0	•	5.6-6.5	0
	10-18	5.4-7.4	2.3-3.9	5.6-6.5	
	18-29	•	,	6.1-7.8	•
	29-41	0.6-3.6	0.0-3.2	6.1-7.8	
	41-60 	0.6-3.6	0.0-3.2 	6.1-7.8) 0 I
612724	İ	i	i	İ	i .
Lordstown, very rocky		•	•	4.5-6.0	•
	1-2	, 0.0 -0		4.5-6.0	
	2-3			4.5-6.0	
	3-5 5-17	4.6-6.5 4.6-6.5	0.1-5.7 0.1-5.7	4.5-6.0 4.5-6.0	•
	3-17 17-22	1 4.6-6.5	0.1-5.7	1 4.5-6.0	•
	22-36	2.3-6.5	0.1-5.7	4.3 0.0 5.1-6.0	•
	36-80				0
Wallpack, very rocky-	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I I 0
wallpack, very locky	1-2	:		4.5 0.0 5.1-6.5	•
	2-5	•	1 0.0-3.9	5.1 0.5 5.1-6.5	•
	5-18	•	•	5.1-6.5	•
	18-24	:	0.6-5.3	5.6-7.3	•
	24-42	1.2-8.8	•	5.6-7.3	•
	42-60	•		5.6-7.8	•
		I	I	I	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	Cation- cachange capacity	•	reaction	Calcium carbon- ate
	 In	meq/100 g	 meq/100 g	 <i>pH</i>	 Pct
612732		1	<u> </u>	l	I
Atherton, very poorly drained	l l 0-2	 75.0-200.0		 4.5-6.0	I I 0
poorly drained	0-2 2-4	•	•		1 0
	4-8	•	3.1-5.4	5.1-7.3	•
	8-10	3.5-8.7	2.4-5.4	5.6-7.8	0
	10-18		2.2-3.1	5.6-7.8	•
	18-29	•	•	5.6-7.8	•
	29-32 32-41	•	•	5.6-7.8 5.6-7.8	•
	1 41-45		•	5.6-7.8	•
	45-50	•	•	5.6-7.8	•
	50-60		0.6-1.8	5.6-7.8	•
	60-70	2.3-4.4	0.6-1.8	5.6-7.8	0
Atherton, poorly]]	1	! !	 	!
drained	0-6	11.4-13.4	9.3-11.0	5.1-7.3	0
	6-12	4.9-9.0	•	5.6-7.8	J 0
	12-30	4.9-9.0	0.4-11.4	5.6-7.8	1 0
	30-40 40-60	5.3-6.7 5.3-6.7	2.3-10.2 2.3-10.2	5.6-7.8 5.6-7.8	I 0 I 0
612738]] I	
Fluvaquents,	! 	i	İ	i	
occasionally flooded	0-5	110.0-20.0	4.5-15.5	5.1-6.5	0
	5-12	10.0-20.0		5.1-6.5	J 0
	12-18	5.0-15.0	7.8-16.5	5.1-7.3	1 0
	18-24 24-60	5.0-15.0 5.0-10.0	7.8-16.5 2.3-7.9	5.1-7.3 5.1-7.3	I 0 I 0
612753	 	1	 	 	
Wallpack, aeolian	! 	i	İ	i I	i I
mantle, very stony	0-1	185.0-94.4	31.5-36.9	4.5-6.0	0
	1-2		•	3.5-5.5	1 0
	2-8 8-14		0.3-9.3	3.5-5.5	0
	0-14 14-21	2.2-7.0 2.2-7.0	0.3-4.1 0.3-4.1	3.5-5.5 3.5-5.5	I 0 I 0
	21-26	:	0.3-4.1	3.5-5.5	•
	26-31	2.2-7.0	0.3-4.1	3.5-5.5	0
	31-36 36-60	2.2-7.0 2.2-7.0	0.3-4.1 0.3-4.1	3.5-5.5 3.5-5.5	I 0 I 0
	36-60	2.2-7.0	0.3-4.1 	3.5-5.5 	l U
612756	l	I	l I	l	I
Wallpack, aeolian		105.0.04.4			1
mantle, very stony	0-1 1-2			4.5-6.0 3.5-5.5	0
	1 2-8	•		3.5-5.5	
	8-14			3.5-5.5	•
	14-21	2.2-7.0	0.3-4.1	3.5-5.5	0
	21-26			3.5-5.5	
	26-31 31-36	•	•	3.5-5.5	•
	31-36 36-60	2.2-7.0	0.3-4.1 0.3-4.1	3.5-5.5 3.5-5.5	
	30 00		1		l

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity		reaction	 Calcium carbon-
	į		capacity		
C10757	In	meq/100 g	meq/100 g	pH	Pct
612757 Wallpack, aeolian	! !	1	! !	! !	
mantle, very stony	 0-1	185.0-94.4	 31.5-36.9	 4.5-6.0	1 0
, , , , , <u>,</u> , , , ,	1-2	•	•	3.5-5.5	0
	J 2-8	3.4-12.6	0.3-9.3	3.5-5.5	0
	8-14	•	•	3.5-5.5	•
	14-21	•	0.3-4.1		0
	21-26 26-31	•	•	3.5-5.5 3.5-5.5	0 0
	31-36	2.2-7.0	•	3.5-5.5	•
	36-60	2.2-7.0	0.3-4.1	3.5-5.5	0
612767	 	 	 	 	!
Wellsboro, extremely	İ	i	İ	İ	İ
stony	I 0-8	4.5-8.0	•	3.5-5.5	0
	8-15	4.6-6.5	0.1-5.7	3.5-5.5	•
	15-24 24-29	4.6-6.5 4.6-6.5	0.1-5.7 0.1-5.7	3.5-5.5 3.5-5.5	0 0
	1 29-37	4.0-10.0	0.1 3.7	: ::: :::	1 0
	37-60	4.0-10.0	0.0-2.3	3.5-5.5	i 0
612768	 	 	 	 	
Wellsboro, extremely	ĺ	İ	İ	ĺ	ĺ
stony	I 0-8	4.5-8.0	3.1-5.4	3.5-5.5	0
	8-15	4.6-6.5	0.1-5.7	3.5-5.5	1 0
	15-24 24-29	4.6-6.5 4.6-6.5	0.1-5.7 0.1-5.7	3.5-5.5 3.5-5.5	0 0
	29-37	4.0-10.0	0.0-2.3	3.5-5.5	
	37-60	4.0-10.0	0.0-2.3	3.5-5.5	0
613393	 	 	! 	 	
Alden, extremely	I	I	I	I	I
stony	0-2	•		4.5-6.0	1 0
	2-7 7-14	3.5-8.7 4.6-9.0	3.1-8.0 0.1-12.0	4.5-7.3 5.1-7.3	0 0
	7-14 14-28	4.6-9.0	0.1-12.0	5.1-7.3 5.6-7.3	•
	28-43	4.6-9.0	0.1-12.0	5.6-7.3	•
	43-60	4.6-9.0	0.1-12.0	6.1-8.4	1 0
613447	! 	1	! 	! 	!
Unadilla	I 0-8	8.3-10.2	6.6-8.7	4.5-7.3	0
	8-14	8.3-10.2	1 111 11 1	4.5-7.3	1 0
			4.6-10.2 4.6-10.2		
				4.5-7.3	
613448	 	1	 	 	[
Unadilla	I 0-8	8.3-10.2	 6.6-8.7	 4.5-7.3	0
				4.5-7.3	
	•	•		4.5-7.3	
	25-39	7.1-13.9	4.6-10.2	4.5-7.3	0
	•	•		4.5-7.3	

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pН	Pct
614075	l	I	I	l	I
Wurtsboro, extremely		105 0 04 4		1 4 5 6 0	1
stony	0-2 2-3	•	•	4.5-6.0 3.5-5.5	0 0
	•	•	•	3.5-5.5	•
	•	•		3.5-5.5	
	6-18	•	•	3.5-5.5	•
	18-24	•	•	3.5-5.5	•
	24-33	•		3.5-5.5	
	33-60	1.2-4.3	0.0-2.3	3.5-5.5	. 0
Swartswood,	!	 	 	1	
extremely stony	I 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I 0
00_00_1 0.001	1-2	•	•	3.5-5.5	•
	2-3	•	•	3.5-5.5	•
	J 3-4	7.8-14.8	3.6-5.9	3.5-5.5	0
	•	•	•	3.5-5.5	•
	21-32		•	3.5-5.5	•
	32-60	1.2-4.3	0.0-2.3	3.5-5.5	0
620179	! !	! !]]	
Arnot, very rocky	I 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I 0
	1-2	•	•	3.5-6.0	•
	2-3			3.5-6.0	0
	J 3-4	7.8-14.8	3.6-5.9	3.5-6.0	0
	4-12	4.6-6.5	•	3.5-6.0	•
	12-17	4.6-6.5	0.1-5.7		1 0
	17-80				0
Lordstown, very rocky	I I 0-1	 85.0-94.4	I 31.5-36.9	 4.5-6.0	I I 0
nords cown, very rocky	1 1-2			4.5-6.0	•
	•	•	•	4.5-6.0	•
	3-5	4.6-6.5	0.1-5.7	4.5-6.0	0
	5-17	4.6-6.5	0.1-5.7	4.5-6.0	J 0
	17-22	•	•	4.5-6.0	•
	22-36	2.3-6.5	0.1-5.7	5.1-6.0	•
	36-80				0
620180	! !	! !	! !	<u> </u> 	! !
Arnot	0-1	85.0-94.4	31.5-36.9	4.5-6.0	i 0
	1-2	5.9-13.4	3.1-11.1	3.5-6.0	0
	2-3	2.3-4.4	1.1-1.8	3.5-6.0	0
		7.8-14.8		3.5-6.0	
				3.5-6.0	
		4.6-6.5 	0.1-5.7 	3.5-6.0 	
	17-80		 		0
Lordstown	 0-1	 85.0-94.4	 31.5-36.9	4.5-6.0	I 0
				4.5-6.0	
			•	4.5-6.0	•
	3-5	4.6-6.5	0.1-5.7	4.5-6.0	0
				4.5-6.0	
	•	•		4.5-6.0	
				5.1-6.0	
	36-80			l –––	1 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 		reaction	 Calcium carbon- ate
620181	In	meq/100 g	meq/100 g	 pH	 Pct
Arnot	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I 0
	1-2	•		3.5-6.0	
	2-3	2.3-4.4	1.1-1.8	3.5-6.0	0
	3-4	7.8-14.8	3.6-5.9	3.5-6.0	0
	4-12			3.5-6.0	•
	12-17 17-80	4.6-6.5 	0.1-5.7 	3.5-6.0 	0 0
Lordstown	0-1			 4.5-6.0	•
	1-2		•	4.5-6.0	•
				4.5-6.0 4.5-6.0	
		•		1 4.5-6.0	•
	17-22			4.5-6.0	•
	22-36	2.3-6.5	0.1-5.7	5.1-6.0	0
	36-80				0
623089] I	1	1	 	 -
Chippewa, extremely	! 	! !		! 	! !
stony	0-2	85.0-94.4	31.5-36.9	4.5-6.0	0
- i			4.4-11.1	4.5-6.5	0
	4-8	6.0-9.4	0.4-9.8	4.5-6.5	1 0
	8-13			4.5-6.5	
	13-21			5.1-7.3	
	21-29 29-34			5.1-7.3 5.6-8.4	
		•	•	5.6-8.4	•
600100		!	!	l ·	ļ .
623109 Farmington	 0-1	 85.0-94.4	 31.5-36.9	l l 4.5-6.0	I I 0
Farming con		•		5.1-7.3	•
	3-9	4.4-15.4	0.0-4.8	5.1-7.8	
	9-15	4.4-15.4	0.0-4.8	5.1-7.8	
	15-80				J 0
624811]	 	 	 	
Galway, very rocky	0-2	85.0-94.4	31.5-36.9	4.5-6.0	0
	2-3		31.5-36.9	4.5-6.0	0
				5.0-7.3	
	5-15	•		5.1-7.8	
	15-24 24-80	4.4-15.4	0.0-4.8	5.1-7.8 	0 0
	21 00	i	i	i I	İ
624813		!	!	l ·	!
Lackawanna,		105 0 04 4	121 5 26 0	1	I ^
extremely stony				4.5-6.0 3.5-5.5	
	2-3 3-7			3.5-5.5	
				3.5-5.5	
				3.5-5.5	•
	16-24	•		3.5-5.5	0
				3.5-5.5	
	29-60	1.2-4.3	0.0-2.3	3.5-5.5	. 0
	l	I	I	l	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
624816 Lordstown, very rocky	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	l I 0
, , ,	1-2	5.9-13.4	:	4.5-6.0	•
	2-3	2.3-4.4	1.1-1.8	4.5-6.0	0
	J 3-5	4.6-6.5	0.1-5.7	4.5-6.0	0
	5-17	4.6-6.5	•	4.5-6.0	•
	17-22	4.6-6.5	0.1-5.7	4.5-6.0	•
	22-36 36-80	2.3-6.5 	0.1-5.7	5.1-6.0 	0 0
Wallpack, very rocky-	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I I 0
	1-2	8.0-35.0	•	5.1-6.5	•
	2-5	6.0-9.4	•	5.1-6.5	•
	5-18 18-24	1.7-15.4 1.2-8.8	•	5.1-6.5	•
	10-24 24-42	1.2-8.8	0.6-5.3	5.6-7.3 5.6-7.3	•
		1.2-8.8	0.6-5.3	5.6-7.8	•
624822				! !	
Lordstown	0-1 1-2	185.0-94.4	•	4.5-6.0 4.5-6.0	•
	l 2-3	5.9-13.4 2.3-4.4	1.1-1.8	4.5-6.0 4.5-6.0	•
	1 2-5 1 3-5	1 4.6-6.5	0.1-5.7	1 4.5-6.0	•
	, 5-17	1 4.6-6.5	0.1-5.7	1 4.5-6.0	•
	17-22	4.6-6.5	0.1-5.7	4.5-6.0	
	22-36	2.3-6.5	0.1-5.7	5.1-6.0	•
	36-80 	 	 	l l	0
Wallpack	0-3	3.5-11.4	3.1-5.4	5.1-6.5	•
	3-9	3.5-11.4	3.1-5.4	5.1-6.5	•
	9-16 16-25	1.7-15.4 1.2-8.8	1.3-4.8 0.6-5.3	5.1-6.5 5.6-7.3	•
	25-65	1.2-8.8	0.6-5.3	5.6-7.8	•
624823	 	 	 	 	
Lordstown	0-1	85.0-94.4	•	4.5-6.0	0
	1-2	5.9-13.4	•	4.5-6.0	•
	2-3	2.3-4.4	1.1-1.8	4.5-6.0	•
	3-5 5-17	4.6-6.5 4.6-6.5	0.1-5.7 0.1-5.7	4.5-6.0 4.5-6.0	•
	17-22	1 4.6-6.5	0.1-5.7	1 4.5-6.0	
	22-36	2.3-6.5		5.1-6.0	•
	36-80				0
Wallpack	0-3	3.5-11.4		5.1-6.5	
				5.1-6.5 5.1-6.5	
			•	5.6-7.3	
	:	•	0.6-5.3	5.6-7.8	
624824				 	
Lordstown				4.5-6.0	
				4.5-6.0	
				4.5-6.0 4.5-6.0	
	•			4.5-6.0	
				4.5-6.0	
		•	•	5.1-6.0	•
	36-80			I	0
	I	I	1	I	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 		reaction	 Calcium carbon- ate
624824 Wallpack	In 0-3 3-9 9-16 16-25 25-65	3.5-11.4 3.5-11.4 3.5-11.4 1.7-15.4 1.2-8.8	3.1-5.4 1.3-4.8	PH	0 0 0
624826 Manlius, very rocky	1-2	3.5-8.7 4.6-6.5	•	 4.5-6.0 3.5-7.3 3.5-6.5 4.5-6.5	, 0 0
Nassau, very rocky	 0-1 1-2 2-15 15-80	3.5-8.7	 31.5-36.9 3.1-5.4 2.5-2.7 	4.5-6.0 4.5-7.3 4.5-6.5 	, j 0
624827 Nassau, very rocky	 0-7 7-13 13-80	 3.5-8.7 4.6-6.5 	 3.1-5.4 2.5-2.7 	 4.5-7.3 4.5-6.5 	•
Manlius, very rocky	0-9 9-20 20-29 29-80	3.5-8.7 4.6-6.5 4.6-6.5 	3.1-5.4 2.5-2.7 2.5-2.7 	3.5-7.3 3.5-6.5 4.5-6.5	i o
624828 Nassau, very rocky	 0-7 7-13 13-80	 3.5-8.7 4.6-6.5 	 3.1-5.4 2.5-2.7 	 4.5-7.3 4.5-6.5 	•
Manlius, very rocky	0-9 9-20 20-29 29-80	3.5-8.7 4.6-6.5 4.6-6.5 	 3.1-5.4 2.5-2.7 2.5-2.7 	3.5-7.3 3.5-6.5 4.5-6.5 	0
624829 Nassau, very rocky	7-13	3.5-8.7 4.6-6.5 	3.1-5.4 2.5-2.7 	4.5-7.3 4.5-6.5 	0
Manlius, very rocky	9-20	4.6-6.5	2.5-2.7	3.5-7.3 3.5-6.5 4.5-6.5	0
624832 Nassau	1-2	3.5-8.7	3.1-5.4	4.5-6.0 4.5-7.3 4.5-6.5	0
624841 Oquaga	1-4 4-20	5.9-13.4 4.6-6.5	3.1-11.1 0.1-5.7	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5	, 0 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
C2494E	In	meq/100 g	meq/100 g	pH	Pct
624845 Farmington	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I I 0
				5.1-7.3	
	3-9	4.4-15.4	0.0-4.8	5.1-7.8	0
	9-15 15-80	4.4-15.4	0.0-4.8	5.1-7.8	I 0 I 0
	l 12-00	 	 	I	U
Galway	0-2	85.0-94.4	 31.5-36.9	4.5-6.0	0
				4.5-6.0	
				5.0-7.3	
	5-15 15-24	•		5.1-7.8 5.1-7.8	
	24-80			J.1 7.0 	1 0
	İ	İ	İ	İ	İ
624846					l .
Arnot	0-1 1-2			4.5-6.0 3.5-6.0	
				3.5-6.0	
				3.5-6.0	0
	•		•	3.5-6.0	•
	12-17	4.6-6.5	0.1-5.7	3.5-6.0	•
	17-80 			 	0
626816 Udifluvents,		 	 	; 	
occasionally flooded	0-3	i	1.6-8.2	4.5-6.0	0
	3-16	1.4-9.9	•	5.0-6.0	•
	16-22			5.0-6.0	
	22-27 27-32	1.4-14.2 1.4-14.2	•	5.0-6.0 5.0-6.0	•
	32-60	1.4-9.9		5.0-6.0	•
635458		I	1	 -	l
Oquaga, very rocky	0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	0
	1-4	5.9-13.4	3.1-11.1	3.5-5.5	0
	4-20			3.5-5.5	
	20-25 25-80	2.3-6.5	0.1-5.7	3.5-5.5	0 0
	25-60 	 	 	i I	l 0
Lackawanna, very		İ	I	l	ĺ
rocky				4.5-6.0	
	2-3		3.1-11.1	3.5-5.5	
			1.1-1.8 3.6-20.0	3.5-5.5	
				3.5-5.5	
		•		3.5-5.5	
	24-29	1.2-4.3	0.0-2.3	3.5-5.5	0
	29-60	1.2-4.3	0.0-2.3	3.5-5.5	I 0
635459] 	 	I I	 	l I
Oquaga, very rocky	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I I 0
,		5.9-13.4		3.5-5.5	
			0.1-5.7	3.5-5.5	0
				3.5-5.5	
	25-80				0
	I	I	I	I	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	exchange	 Effective cation- exchange capacity	reaction	 Calcium carbon- ate
	' In	meq/100 g	meq/100 g	' pH	 Pct
635459	l	I	I	I	I
Lackawanna, very		105.0.04.4			1
rocky	•			4.5-6.0 3.5-5.5	
		•		3.5-5.5	
	7-8	7.8-14.8	3.6-20.0	3.5-5.5	0
				3.5-5.5	
	•			3.5-5.5 3.5-5.5	
	•		•	3.5-5.5	•
	İ	İ	İ	İ	İ
740953	l	1	I	l	1
Delaware, rarely flooded	l I 0-1	 85.0-94.4	 31.5-36.9	l I 5.1-6.5	I I 0
1100ded	•	•	•	5.1-6.5 5.1-6.5	•
				5.1-6.5	
	11-20	2.2-7.0	0.3-4.1	5.1-6.5	0
				5.1-6.5	•
				5.1-6.5 5.1-6.5	
		,		5.1-6.5	•
		i	İ	İ	i
740968	Ι .	L	L	l _	I .
Nassau, very rocky	0-7 7-13			4.5-7.3	•
	7-13 13-80	4.6-6.5 	2.5-2.7	4.5-6.5 	0 0
	15 00	i	i	i I	İ
Manlius, very rocky	0-9			3.5-7.3	•
	9-20		2.5-2.7	3.5-6.5	•
	20-29 29-80	4.6-6.5 	2.5-2.7	4.5-6.5 	0 0
	23 00	i	İ	i I	İ
740969	İ	İ	İ	İ	ĺ
Nassau, very rocky		3.5-8.7	3.1-5.4	4.5-7.3	•
	7-13 13-80	4.6-6.5	2.5-2.7	4.5-6.5 	0 0
	13-60 	 	 	i I	1
Manlius, very rocky	0-9	3.5-8.7	3.1-5.4	3.5-7.3	0
	9-20	•	•	3.5-6.5	•
	20-29 29-80	4.6-6.5	2.5-2.7	4.5-6.5	0 0
	29-60 		 	I	1 0
740971	i I	i	i İ	i	i
Oquaga, very rocky				4.5-6.0	
				3.5-5.5	
	•	•	•	3.5-5.5 3.5-5.5	•
	25-80			•	0
	l	I	I	I	I
Lackawanna, very	1	105.0.04.4			1
rocky		•	•	4.5-6.0 3.5-5.5	•
	•	•	•	3.5-5.5	•
				3.5-5.5	
	•			3.5-5.5	
			•	3.5-5.5	•
				3.5-5.5 3.5-5.5	
	, == ~~ 			, 212 3.3	I

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	 Cation- exchange capacity 		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
740972 Oquaga, very rocky	 0-1 1-4 4-20 20-25 25-80	5.9-13.4	3.1-11.1	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 	, 0 0
Lackawanna, very	i i			 4 5 6 0	!
rocky	0-2 2-3 3-7 7-8 8-16 16-24 24-29 29-60	5.9-13.4 2.3-4.4 7.8-14.8 4.6-6.5 4.6-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-20.0 0.1-5.7 0.1-5.7 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0
740974	İ	i	i	İ	İ
0quaga	0-1 1-4 4-20 20-25 25-80	85.0-94.4 5.9-13.4 4.6-6.5 2.3-6.5 		4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5	0
740975	 	! 	! 	! 	!
Arnot	0-1 1-2 2-3 3-4 4-12 12-17 17-80	5.9-13.4 2.3-4.4	3.1-11.1	4.5-6.0 3.5-6.0 3.5-6.0 3.5-6.0 3.5-6.0 3.5-6.0	0 0 0 0
740987				, 0 = 6 0	
Scio	0-6 6-13 13-23 23-28 28-50 50-59 59-72	8.3-10.2 8.3-10.2 7.1-13.9 7.1-13.9 7.1-13.9 8.7-11.5 8.7-11.5	4.6-10.2 4.6-10.2 4.6-10.2 6.1-11.5	3.5-6.0 3.5-6.0 3.5-6.0 3.5-6.0 3.5-6.0 5.1-7.8 5.1-7.8	0 0 0 0
740988	į	į	į	į	į
Udifluvents, occasionally flooded	3-16 16-22	1.4-14.2	1.1-10.7	4.5-6.0 5.0-6.0 5.0-6.0 5.0-6.0 5.0-6.0 5.0-6.0	0 0 0 0
740991 Unadilla	 0-8 8-14 14-25 25-39 39-60		4.6-10.2	4.5-7.3 4.5-7.3 4.5-7.3 4.5-7.3 4.5-7.3 4.5-7.3	0 0 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	 Depth 	Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
740992 Unadilla	 0-8 8-14 14-25 25-39	8.3-10.2 7.1-13.9	4.6-10.2	 4.5-7.3 4.5-7.3 4.5-7.3	0 1 0
			•	4.5-7.3	•
740995 Wellsboro, extremely	 	 	 	 	
stony	24-29	4.6-6.5 4.6-6.5	0.1-5.7 0.1-5.7	3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0
	37-60	4.0-10.0	0.0-2.3	3.5-5.5	•
740996 Wellsboro, extremely		 	 	 	
stony	8-15 15-24 24-29 29-37	4.6-6.5 4.6-6.5 4.6-6.5 4.0-10.0	0.1-5.7 0.1-5.7 0.1-5.7 0.1-5.7	3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0
	37-60 	4.0-10.0 	0.0-2.3 	3.5-5.5 	I 0 I
741149 Lackawanna,	 	1	 	 	
extremely stony	2-3 3-7 7-8 8-16 16-24 24-29	5.9-13.4 2.3-4.4 7.8-14.8 4.6-6.5 4.6-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-20.0 0.1-5.7 0.1-5.7 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0
741150] 	 	 	 	
Lackawanna, extremely stony	2-3 3-7 7-8 8-16 16-24 24-29	5.9-13.4 2.3-4.4 7.8-14.8 4.6-6.5 4.6-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-20.0 0.1-5.7 0.1-5.7 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0
801114 Oquaga	1-4 4-20	5.9-13.4 4.6-6.5	3.1-11.1 0.1-5.7	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5	0 1 0
810906 Oquaga	1-4 4-20	5.9-13.4 4.6-6.5	3.1-11.1 0.1-5.7	 4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5	0 I 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	Cation- cxchange capacity		reaction	Calcium carbon- ate
	 In	meq/100 g	meq/100 g	' <i>pH</i>	 Pct
1147465	l	I	l	l	l
Alden, extremely		105 0 04 4		1 4 5 6 0	l 0
stony	0-2 2-7			4.5-6.0 4.5-7.3	
	7-14	•		5.1-7.3	
	14-28			5.6-7.3	0
	28-43 43-60	4.6-9.0 4.6-9.0	•	5.6-7.3 6.1-8.4	•
	43 00	4.0 3.0	l 0.1 12.0	0.1 0.4	ı
1147467 Arnot, very rocky	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	l I 0
ninot, tery rocky	1-2	•		3.5-6.0	•
	2-3	2.3-4.4	1.1-1.8	3.5-6.0	0
	3-4		•	3.5-6.0	•
	4-12		•	3.5-6.0	•
	12-17 17-80	4.6-6.5 	0.1-5.7 	3.5-6.0 	0 0
Lordstown, very rocky	 0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	l I 0
Horascown, very rocky	1-2			4.5-6.0	•
	2-3	2.3-4.4		4.5-6.0	
	3-5	•		4.5-6.0	
	5-17	•	•	4.5-6.0	•
	17-22 22-36		•	4.5-6.0 5.1-6.0	•
	36-80				0
1147468]] 	
Arnot	0-1	 85.0-94.4	31.5-36.9	4.5-6.0	i 0
	1-2	•		3.5-6.0	
	2-3 3-4	•		3.5-6.0 3.5-6.0	
	3- 4 4-12	•		3.5-6.0 3.5-6.0	•
	12-17	4.6-6.5	0.1-5.7	3.5-6.0	•
	17-80				J 0
Lordstown	0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I I 0
	1-2			4.5-6.0	
	2-3			4.5-6.0	
	3-5 5-17			4.5-6.0 4.5-6.0	
	17-22	•		4.5-6.0	
	22-36	2.3-6.5	0.1-5.7	5.1-6.0	
	36-80			 	J 0
1147469		İ	İ	l I	İ
Arnot			31.5-36.9		
	•	•		3.5-6.0	
				3.5-6.0 3.5-6.0	
		•		3.5-6.0	•
	12-17	4.6-6.5	0.1-5.7	3.5-6.0	0
	17-80			 	J 0
Lordstown			•	4.5-6.0	•
			•	4.5-6.0	•
				4.5-6.0	
				4.5-6.0 4.5-6.0	
		•		4.5-6.0	•
		2.3-6.5		5.1-6.0	
	36-80	I	I	l	

Table 18.--Chemical Soil Properties--Continued

	<u> </u>	<u> </u>	<u> </u>		
Map unit symbol and soil name	 Depth 	Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
1147470	In	meq/100 g	meq/100 g	pH	Pct
1147470 Atherton, very	 	 	! !	 	
poorly drained	ı I 0-2	 75.0-200.0	 31.5-36.9	 4.5-6.0	i I 0
	2-4	75.0-200.0	31.5-36.9	4.5-6.0	0
	4-8		•	5.1-7.3	•
	8-10	3.5-8.7	2.4-5.4 2.2-3.1	5.6-7.8 5.6-7.8	•
	10-18 18-29	4.5-8.0 4.5-8.0	2.2-3.1 2.2-3.1	5.6-7.8 5.6-7.8	
	29-32	4.5-8.0	2.2-3.1	5.6-7.8	•
	32-41	4.5-8.0	2.2-3.1	5.6-7.8	0
	41-45	2.3-4.4	0.6-1.8	5.6-7.8	•
	45-50		•	5.6-7.8	•
	50-60 60-70	2.3-4.4	0.6-1.8 0.6-1.8	5.6-7.8 5.6-7.8	•
Atherton, poorly	 	I I	 	l I	
drained	•	11.4-13.4 4.9-9.0	9.3-11.0 0.4-11.4	5.1-7.3 5.6-7.8	
	1 12-30	4.9-9.0	0.4-11.4	1 5.6-7.8	•
	30-40	5.3-6.7	2.3-10.2	5.6-7.8	•
	40-60	5.3-6.7	2.3-10.2	5.6-7.8	I 0
1147471	 	 	 	 	
Catden		1102.1-146.7	•	4.5-7.3	•
		1102.1-146.7		4.5-7.3	
		102.1-146.7 102.1-146.7		4.5-7.3 4.5-7.3	•
		102.1-146.7	•	4.5-7.3	•
1147474	 	 	 	 	
Chippewa, extremely	Ι	L	l	l	Ι
stony	0-2	•	31.5-36.9	4.5-6.0	0
	2-4 4-8	10.9-15.1 6.0-9.4	4.4-11.1 0.4-9.8	4.5-6.5 4.5-6.5	0 0
	8-13	4.6-15.4	0.9-12.0	4.5-6.5	•
	13-21	1.2-8.8	0.1-10.5	5.1-7.3	
	21-29	1.2-8.8	0.1-10.5	5.1-7.3	
	29-34 34-60	1.2-8.8 1.2-8.8	0.1-10.5 0.1-10.5	5.6-8.4 5.6-8.4	•
1147475	 		 	 	
Colonie	0-2	3.5-7.7	0.0-3.3	5.1-6.5	, I 0
	2-11	3.5-7.7	0.0-3.3	5.1-6.5	0
				5.1-6.5	
		0.6-3.8 0.6-3.8		5.1-7.3 5.1-7.3	
1147470					į
1147478 Delaware, rarely	l 	! !	! 	 	
flooded	 0-1	 85.0-94.4	 31.5-36.9	, 5.1-6.5	0
	1-4	3.4-12.6	0.3-9.3	5.1-6.5	0
				5.1-6.5	
				5.1-6.5	
				5.1-6.5 5.1-6.5	
	41-56			5.1-6.5	
	:	1.3-3.7	1.0-4.2	5.1-6.5	0
	l	I	I	I	l

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	Cation- cachange capacity		reaction	Calcium carbon- ate
		meq/100 g	 meq/100 g	 pH	 Pct
1147482		I T	I	I	Ι
Fredon, very stony	0-1 1-8			4.5-6.0 5.1-7.3	
		•	•	5.1-7.3	
i		•		5.1-7.3	
1			0.1-5.7	5.1-7.3	0
				5.6-8.4	
		•	•	5.6-8.4 5.6-8.4	
	45-55	•	•	5.6-8.4	
		•	•	5.6-8.4	
Halsey, very stony	0-1	 85.0-94.4	 31.5-36.9	 4.5-6.0	I I 0
I				5.1-7.3	
	5-11			5.1-7.3	
			•	5.1-7.3 5.6-8.4	
				5.6-8.4	
i	35-49	0.6-3.6	0.0-3.2	5.6-8.4	0
1		•		5.6-8.4	•
	56-60	0.6-3.6 	0.0-3.2 	5.6-8.4 	0
1147485		!			
Hazen, very stony	0-1 1-10			4.5-6.0 5.6-6.5	
	10-18	•	•	5.6-6.5	
i	18-29	0.6-3.6	0.0-3.2	6.1-7.8	0
1	29-41	•	0.0-3.2	6.1-7.8	
	41-60	0.6-3.6 	0.0-3.2 	6.1-7.8 	l 0 I
Hoosic, very stony	0-1	185.0-94.4	31.5-36.9	4.5-6.0	0
		•		4.5-5.5	
		•		4.5-5.5 4.5-6.0	
	27-37	•	•	4.5-6.0	
i	37-49	•	•	4.5-6.0	
	49-60	0.6-3.6	0.0-3.2	4.5-6.0	0
1147490		i	i		i
Hoosic, very stony				4.5-6.0	0
	1-9 9-21	•		4.5-5.5 4.5-5.5	
		•	•	4.5-6.0	
i				4.5-6.0	
			•	4.5-6.0	•
	49-60	0.6-3.6 	0.0-3.2 	4.5-6.0 	0
Hazen, very stony				4.5-6.0	
				5.6-6.5 5.6-6.5	
		•	•	6.1-7.8	
i				6.1-7.8	
	41-60	0.6-3.6	0.0-3.2	6.1-7.8	J 0
1147491		İ	İ	İ	i
Hoosic, very stony		•	•	4.5-6.0	
l l				4.5-5.5 4.5-5.5	
				4.5-6.0	
İ				4.5-6.0	
				4.5-6.0	
	49-60	0.6-3.6	0.0-3.2	4.5-6.0	0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name 	Depth	Cation- cxchange capacity		reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
1147491 Otisville, very stony	1-2	5.7-9.1 0.6-3.8	2.7-9.2 0.0-3.2	 4.5-6.0 3.5-6.5 3.5-6.5 3.5-6.5	, 0 0
	11-19 19-31 31-43	0.6-3.6 0.6-3.6 0.6-3.6	0.0-3.2 0.0-3.2 0.0-3.2	3.5-6.5 4.5-6.0 4.5-6.0 4.5-6.0	0 0 0
1147492 Lackawanna,		 	 	 	
extremely stony 	0-2 2-3 3-7 7-8 8-16 16-24 24-29 29-60	5.9-13.4 2.3-4.4 7.8-14.8 4.6-6.5 4.6-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-20.0 0.1-5.7 0.1-5.7	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0
1147500		! 	! 	! 	i I
Wurtsboro, extremely stony	0-2 2-3 3-5 5-6 6-18 18-24 24-30 30-60	5.9-13.4 2.3-4.4 7.8-14.8 2.3-6.5 2.3-6.5 1.2-4.3	1.1-1.8 3.6-5.9 0.1-5.7 0.1-5.7 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0
1147501 Wurtsboro, extremely		 	 	 	
stony 	24-33	5.9-13.4 2.3-4.4 7.8-14.8 2.3-6.5 2.3-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.1-5.7 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0
Swartswood, extremely stony	1-2 2-3 3-4 4-21 21-32	5.9-13.4 2.3-5.0 7.8-14.8 2.3-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.0-2.3	 4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0
 1147502 Wurtsboro, extremely		 	 	 - 	
stony 	2-3 3-4 4-6 6-18 18-24 24-33	5.9-13.4 2.3-4.4 7.8-14.8 2.3-6.5 2.3-6.5 1.2-4.3	3.1-11.1 1.1-1.8 3.6-5.9 0.1-5.7 0.1-5.7 0.0-2.3 0.0-2.3	4.5-6.0 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5 3.5-5.5	0 0 0 0 0

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth	 Cation- exchange capacity 	•	reaction	 Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
1147502		1	!	!	<u> </u>
Swartswood, extremely stony	 0-1	1 85.0-94.4	। 31.5−36.9	I 4.5-6.0	I I 0
cheremery beeny	1-2	•	•	3.5-5.5	0
	2-3	2.3-5.0	1.1-1.8	3.5-5.5	0
	3-4	•	•	3.5-5.5	•
	4-21 21-32	•	0.1-5.7 0.0-2.3	3.5-5.5 3.5-5.5	•
	32-60	1.2-4.3	0.0-2.3	3.5-5.5	1 0
	l	Ì	İ	ĺ	İ
1147527	0 10			1 5 0 6 0	1
Udorthents	0-12 12-72	5.9-20.0 0.6-3.6	3.1-8.4 0.0-3.2	5.0-6.0 5.1-5.5	l 0 I 0
	/-	1	1	l 3.1 3.3	İ
1147532	l	I	I	I	l
Udorthents	0-12 12-72	5.9-20.0	3.1-8.4	5.0-6.0	1 0
	12-72 	0.6-3.6 	0.0-3.2 	5.1-5.5 	I 0
1147533		i	i	i	İ
Wurtsboro, extremely	l	I	I	I	l
stony	0-2		•	4.5-6.0	1 0
	2-3 3-4	•	3.1-11.1 1.1-1.8	3.5-5.5 3.5-5.5) 0 I 0
	4-6	•	•	3.5-5.5	•
	6-18	•	0.1-5.7	3.5-5.5	0
	18-24	•	•	3.5-5.5	•
	24-33 33-60	•	0.0-2.3 0.0-2.3	3.5-5.5 3.5-5.5	•
	33 00		1	l 3.3 3.3	l
Swartswood,		İ	İ	Ī	ĺ
extremely stony		•	•	4.5-6.0	•
	1-2 2-3	:	3.1-11.1 1.1-1.8	3.5-5.5 3.5-5.5) 0 I 0
	3-4	•	•	1 3.5-5.5	•
	4-21	•	0.1-5.7	3.5-5.5	0
	21-32		•	3.5-5.5	•
	32-60	1.2-4.3	0.0-2.3	3.5-5.5	0
1948749	! 	i	İ	i I	'
Arnot	0-8	12.0-22.0	3.9-8.1	4.2-6.6	0
	8-16	3.0-13.0 	1.6-5.1 	3.6-6.0 	•
	16-26) 0 I
1948750		i	i	i	i
Arnot				4.2-6.6	•
	8-16 16-26	3.0-13.0	1.6-5.1	3.6-6.0) 0 I 0
	10-20 	 	 	i	I 0
1948751	ĺ	i	i İ	İ	İ
Arnot	0-8	•		4.2-6.6	•
	8-16 16-26	3.0-13.0 	1.6-5.1 	3.6-6.0 	l 0 I 0
	16-26 	 	 	 	1 U
1948774		İ	İ	I	I
Conotton	0-9	8.0-16.0	•	4.5-6.5	•
	9-45 45-80	3.0-12.0 2.0-10.0	•	4.5-7.3 5.6-7.8	•
	 ~30-00	2.0-10.0	, I	5.0-7.8 	I 1 0-10
1948775		i	İ	İ	I
Conotton	0-9	8.0-16.0	•	4.5-6.5	•
	9-45 45-80	3.0-12.0 2.0-10.0	•	4.5-7.3 5.6-7.8	•
	=2.00	2.0 10.0	- 	3.0-7.8 	 0-10

Table 18.--Chemical Soil Properties--Continued

Map unit symbol and soil name	Depth 	Cation- exchange capacity 	exchange	Soil reaction 	Calcium carbon- ate
	 	 mea/100 a	 meq/100 g	 <i>pH</i>	 Pct
1948776 Conotton	 0-9 9-45 45-80	8.0-16.0 3.0-12.0 2.0-10.0	I	 4.5-6.5 4.5-7.3 5.6-7.8	0 0 0
1948777 Conotton	 0-9 9-45 45-80	 8.0-16.0 3.0-12.0 2.0-10.0	 	 4.5-6.5 4.5-7.3 5.6-7.8	 0 0 0-10
1948797 Manlius	 0-8 8-24 24-32 32-40	 12.0-25.0 3.0-13.0 2.0-9.0 	 2.0-7.4 1.2-4.4 	 4.2-6.6 3.6-6.0 4.5-6.5 	 0 0 0 0
1948802 Manlius	8-24	 12.0-25.0 3.0-13.0 2.0-9.0 	•	 4.2-6.6 3.6-6.0 4.5-6.5 	 0 0 0
1948818 Manlius	 0-8 8-24 24-32 32-40	 12.0-25.0 3.0-13.0 2.0-9.0 	 2.0-7.4 1.2-4.4 	 4.2-6.6 3.6-6.0 4.5-6.5 	 0 0 0 0
1948832 Penargyl	12-74	 10.0-20.0 10.0-15.0 10.0-15.0 	 3.6-6.8 	 4.5-7.3 4.5-6.5 4.5-6.0 	 0 0 0 0
1948846 Phelps	 0-10 10-22 22-30 30-79	 5.5-15.4 9.1-18.4 9.1-18.4 0.5-2.7	 	 5.6-7.3 5.6-7.3 5.6-7.3 7.4-8.4	 0 0 0 0
1948855 Udorthents, loamy	5-40	 3.1-26.3 3.1-26.3 3.1-20.5		 4.5-7.3 4.5-7.3 4.5-8.4	
1948989 Delaware		 5.0-10.0 3.0-6.0 3.0-6.0	 	 5.1-7.3 5.1-7.3 5.6-7.3	 0 0 0

Table 19. --Water Features

[See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding a rather than to individual months. Absence of an entry indicates that the feature is not a concern or estimated. Depth to water table is based on a representative value]

			Water table	table		Ponding		
National symbol and soil name	 Hydro- logic group	Month	Upper limit	Lower	Surface water depth	Duration	Frequency	
290836			Ft	Ft	Ft			
Hoosic, very stony	м	 Jan-Dec		!			None	
Otisville, very stony	₫	Jan-Dec		!			None	
296265 Alden	Δ							
		Jan-Jun Nov-Dec	0.0	>6.0 >6.0	10.0-1.01	Very long Very long	Frequent Frequent	
296269 Fluvents, (alluvial land)	c/D							
		Jan-Apr	1.5	>6.0	 -	:	None	> ;
		May-Jun Sentember	 		 		None	> >
		Oct-Dec	1.5	>6.0			None	> >
296271 Alvira								
	· - — -	Jan-May	0.0	1.8			None	
Watson	ບ 	l Oct-Dec	 - -	o -	 ¦ 			
		Jan-Mar Nov-Dec	1 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2 .3 .3 .3			None None	
296272 Bath	υ	 - Mar-Apr	2.1	2.2			None	
296273 Bath	υ	 - - 	2.1	2.5	 		None	
296274 Bath	υ 	 - Mar-Apr	2.1	2.2	 		None	
296275 Bath	υ	 - Mar-Apr	2 .1	2.2			None	
	_	_	_		_	_	_	

Table 19. -- Water Features -- Continued

-		Frequency 		None	None		None		None	None	e e e e e e e e e e e e e e e e e e e	None	None None	None None None	None	-	None
Ponding		Duration - -		 ¦			;									-	-
		Surface water depth	Ft	 		 		·	 					 		-	
table		Lower limit	Ft	2.2	!		-			2. c		2 .5	1.6 1.6	1 1. 8 8.	1.3		1.3
Water		Upper limit	Ft	2.1) m	 	2 2 3 3 3 3	 0.0	e.0 	-	0.3
	_	Month		 Mar-Apr	Jan-Dec		Jan-Dec		Jan-Dec Jan-Dec	Jan-Mar	ne D	Nov-Dec	Jan-Mar Nov-Dec	Jan-Feb Mar-Apr	May Nov-Dec	-	Jan-Feb
	_	Hydro- logic group		υ	Д	Δ	Δ	Δ	Α	υ	υ		υ	Δ	۵ ــــــــــــــــــــــــــــــــــــ	1	_
	_	National symbol and soil name		296276 Bath	296277 Benson	296278 Benson	Rock outcrop	296279 Benson	Rock outcrop	296280 Braceville	296281 Braceville	296283	Buchanan	296288 Chippewa	Nowesi ah		

Table 19. --Water Features--Continued

			Water table	table		Ponding		
National symbol and soil name	Hydro- logic group	Month	Upper	Lower	Surface water depth	Duration	Frequency	
296289 Objects			Ft	Ft	Ft			
CITTOTO	a - –	 Jan-Feb	0.3	1.3	 -	!	None	
	_	Mar-Apr	0.0	1.3	-		None	
	_	May	0.3	1.3			None	
N Comment		Nov-Dec	— ი	1.3	 ¦ 	!	None	
NOTWICK	a 	 Jan-Feb	 0.3	1.3	 ¦	-	None	
		Mar-Apr	0.0	1.3	 -	-	None	
	_	May	0.3	1.3		!	None	
		Nov-Dec	e.0 -	1.3	- ·	!	None	
296295 Udorthents, cut and fill	 B/D							
		Jan-May Nov-Dec	3.5	0.9× ×6.0			None	
))				
296297 Dekalb	υ 	, , , , , , , , , , , , , , , , , , ,						
		Jan-Dec 	 -	! ! !	 ¦ 	!	None	
296298 Dekalb	υ	Jan-Dec				!	None	
296303								
Hazleton	м — — -	 Jan-Dec 	 		 		None	
296304								
HOLLY	Ω	 -TeX	~ ~	9	 ¦ 	 		
		November) - -) 		!	None	
		December	e.0	>6.0	:		None	
296311								
Lackawanna	ບ 	 Mar-Apr	2.1	2.3	 :	!	None	
Bath	υ _	•	_		· –		_	
		Mar-Apr 	2.1	2.2	 	!	None	
296312 Lackawanna	υ 				. – –		- 	
		Mar-Apr 	2.1	2.3	 	!	None	

Table 19. -- Water Features -- Continued

	<u> </u>	<u> </u>										
	Frequency		None	None	None	None	None	None	None	None	None None None	None None None None
Ponding	Duration											
	Surface water depth	Ft			 				 		 	
table	Lower	Ft	2.3	2.3	2.3	3.0	!!!		;	-	1.7	1.7 1.7 1.7 1.1 1.1
Water table	Upper limit	Ft	2.1	2.1	2.1	2.5				:	1 1 1 4 2 4	ц пппп ф 4.044
	Month		Mar-Apr	 	 	Jan-Mar	 	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Feb Mar-Apr May	December Jan-Feb Mar-Apr December
	Hydro- logic group		υ	υ	υ	υ	υ	υ	υ	υ	υ	υ
	National symbol and soil name	296313	Lackawanna	296315 Lackawanna	296316 Lackawanna	296317 Laidig	296326 Lordstown	296327 Lordstown	296328 Lordstown	Oquaga	296329 Mardin	296330 Mardin

Table 19. --Water Features -- Continued

			Water	table		Ponding		
National symbol and soil name	Hydro- logic group	Month	Upper limit	Lower	Surface water depth	Duration	Frequency	
296331 Mardin		Jan-Feb Mar-Apr May December	H 1.22	1.7 1.7 1.7 1.7	FF		None None None None None	
296332 Mardin	υ 	 Jan-Feb Mar-Apr May December		1.7			None None None None None None	
296335 Meckesville	υ	 Jan-Apr Nov-Dec	 	0.0 9.0 0.9	 		None None	
296337 Meckesville	υ	Jan-Apr Nov-Dec	% % % %	0.0 9.0 	 		None None	
296338 Morris	υ 	Jan-Feb Mar-Apr May December		4 4 4 4			None None None None None	
296339 Morris	υ 	Jan-Feb Mar-Apr May December					None None None None None	
296340 Morris	υ 	Jan-Feb Mar-Apr May	o o o o o		 		None None None None None	

Table 19. -- Water Features -- Continued

			Water	table		Ponding		
National symbol and soil name	 Hydro- logic group	Month	Upper limit	Lower limit	Surface water depth	Duration	Frequency	
096341			Ft.	Ft	Ft			
Freetown, mucky peat	Δ	Jan-May Jun-Oct Nov-Dec	0.0	0.00 9,00 9,00 9,00	0.0-0.5 0.0-0.5 0.0-0.5	Long Long Long	Frequent Occasional Frequent	
296342 Paupack, mucky peat (shallow)	Δ	 - Jan-Dec	0. 0.	0.9	 - 0.0-1.0	Very long	 Frequent	
296343 Oquaga	υ 							
Lackawanna	υ 	Jan-Dec Mar-Apr	2.1	2.3			None None	
296344 Oquaga	ن 							
Lackawanna	υ 	Jan-Dec Mar-Apr	2.1		 		None None	
296346 Oquaga	υ 	,						
Lackawanna	υ 	Jan-Dec Mar-Apr	2 .1	2.3			None None	
296347 Oquaga	υ 	 Jan-Dec	¦ 	;	 ¦	;	None	
Lackawanna	υ 	 Mar-Apr	2.1	2.3		-	None	
296348 Philo	м	 Jan-Apr May November	2	9			None None	
		December 	 2.3	0.9<	 ¦ 	!	None	₽

Table 19. -- Water Features -- Continued

			Water	table		Ponding		
National symbol and soil name	 Hydro- logic group 	Month 	Upper	Lower	Surface water depth	Duration	Frequency	
296349 Pope		January Feb-Mar April	Ft Ft	Ft Ft	FF FF		None None None	
296350 Pope	м	Nov-bec 		0 9 1	 		None None None None None None None None	
296351 Rexford, somewhat poorly drained	υ	 Jan-Feb Mar-Apr May	1.00 0.00 8.00	1.5	 		None None None None None	
Rexford, poorly drained	υ 	December 	0 0000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			None None None None None	
296355 Sheffield	Δ	Jan-May December	0.0 0.0	0.9 8.0 9.0	0.0-1.0		 	
296363 Dystrochrepts, very stony	м	Jan-Dec			 		None	
296369 Wayland	C/D	Jan-Jun Nov-Dec	0.0	> 0.0 > 6.0	0.0-0.5	Very long	Frequent Frequent	
296376 Wellsboro	υ 	Jan-Feb Mar-Apr May December	다 다 다 다 4. C/ 4. 4.	1.7 1.7 1.7	 		None None None None	

Table 19. -- Water Features -- Continued

	- - 장					_							. ـ ـ ـ ـ ـ		<u>-</u>
	Frequency		Non	None	None	None	None	None	None	None	None		Frequent	Frequent None None	Occasiona
Ponding	Duration				!								Very long	Very Long 	 Very long Occasional
	Surface water depth	Ft			-		 	 	 	 			10.0-0.5		 - - - - - - -
table	Lower	Ft	-	1.7	1.7	1.7							0.0	0 0 0	2.0
Water	Upper	Ft		1 6	1 1 1	1.4				 			0 0	0 0 0	 0.
	Month		To C. L. C. C. C. C. C. C. C. C. C. C. C. C. C.	Mar-Apr	May	December	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec		Jan-May	Nov-Dec Jan-May Nov-Dec	Jan-May
	Hydro- logic group		ບ 		_		at	· ∢	· ∢				Δ	υ	Δ
	National symbol and soil name	296379	Wellsboro				296385 Wyoming	296386 Wyoming	296387 Wyoming	296388 Wyoming	296389 Wyoming	296390 Water.	297185 Edgemere	Shohola	297186 Edgemere

Table 19. --Water Features -- Continued

			Water	table		Ponding		
National symbol and soil name	Hydro- logic group	Month	Upper	Lower limit	Surface water depth	Duration	Frequency	
297188			Ft	Ft	Ft			
Manlius	υ	1						
Arnot	- c/p -	Jan-Dec	 	!	 ¦ 	<u> </u>	None	
Book cutoron		Jan-Dec		!		:	None	
400000		Jan-Dec		-		:	None	
297189								
Mantius	·	Jan-Dec		-			None	
Arnot	С/д -	Jan-Dec	 ¦	!	 ¦		None	
Rock outcrop		Jan-Dec		-			None	
297190 Braceville	υ 							
		Jan-Apr Nov-Dec	1.7	2.2			None	
			· :	N				
29/191 Wyalusing	- — Д							
		Jan-May	e. 0	0.9			None	>
		Sep-Oct	n m.	0.0.	 		None	
		Nov-Dec	0.3	>6.0			None	>
297192								
Pope	— — m	Jan-Mav	 :		 :		None	
	_	Jun-Nov	:-		:-	-	None	
		December	 ¦ 		 ¦ 		None	
297193 Barrande								
rackach		Jan-Dec	0.0	>6.0	0.0-1.01	Very long	Frequent	
297196 Free town								
		Jan-May Jun-Oct	0.0	>6.0 >6.0	10.0-0.51		Frequent Occasional	
		Nov-Dec	 0. 0		10.0-0.51	Long	Frequent	

Table 19. -- Water Features -- Continued

	<u> </u>	<u> </u>										
	Frequency		None	None	None	None	None	None	None	None None None	None None None	None None None
Ponding	Duration					:						
	Surface water depth	Ft		 	 	 		 		 		
table	Lower	Ft	-		-		!		>6.0	>6.0	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Water table	Upper limit	Ft							. s		4, 1 . 1 . 1	1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Month		Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	 	Jan-Dec	Jan-Apr	May Jun-Nov December	Jan-Apr May Jun-Nov	December Jan-Apr Nov-Dec
	Hydro- logic group		υ	υ	υ	щ						υ
	National symbol and soil name	297197	Manlius	297198 	297201 Oquaga	297203 Delaware	297204 Delaware	297205 Delaware	297209 Philo		297210 Barbour	297216 Wurtsboro

Table 19. -- Water Features -- Continued

Hvdro-		Month	Water Upper	Water table	Surface	Ponding	 - Frequency
hydro- logic group 			Opper limit 	Lower limit -	water depth		
υ	I		E E	F.	Ft		, ,
		Nov-Dec	9. H	 			None
C/D	_	 Jan-Dec 	¦ 	¦ 			None
C/D	_	 Jan-Dec					None
∢		 Jan-Dec					None
∢		 Jan-Dec					None
∢		 Jan-Dec					None
⋖		 Jan-May Jun-Nov December					None None None
υ		Jan-Mar April May December	1 1 1 1 4 2 4 4	11.7			None None None None None
υ		 Jan-Mar April May December	1 1 1 1 4 2 4 4	1.7 7.1 1.7 7.7 7.1			None None None None None None
_		_	_	_	_		-

Table 19. -- Water Features -- Continued

			Water	table		Ponding	
National symbol and soil name	Hydro- logic group	Month	Upper limit	Lower	Surface water depth	Duration	Frequency
297239 Mardin	υ	Jan-Mar	Ft 1.4	Ft 1.7	F.		None
		April May December	 	1.7	 		None None None
297240 Mardin	υ	Jan-Mar April May December	1 1 1 1 4 2 4 4	1.7	 		None None None None None None
297241 Unadilla	м	Jan-Dec			 		None
297242 Shohola	υ	Jan-May Nov-Dec	1 H 0 O	2.0			None None
Edgemere	Δ	 Jan-May Nov-Dec	0.0	2 2	10.0-0.51	Very Very	long Occasional long Occasional
297243 Shohola	υ a	Jan-May Nov-Dec Jan-May	00 00	00 00	0.00		None None Very long Occasional
297244 Lordstown	υυ	Jan-Dec Mar-Abr) N			>1 1 	None None
297247 Chenango	4	Jan-Dec			 		None

Table 19. -- Water Features -- Continued

			Water	table		Ponding	-	
National symbol and soil name	 Hydro- logic group 	Month	Upper limit	Lower	Surface water depth	Duration	Frequency	
297248 Chenango	<	Jan-Dec	Ft.	Ft.	Ft		None	
297249 Chenango		 - Jan-Dec	 		 		None	
297253 Craigsville	д — — — — — -	Jan-Mar Apr-May	0 0	0 . 1			None None	> > 2
Wyoming	⋖	December December Jan-Dec	0	0 1 0 1 0			None None None	> >
297254 Pits, shale	Д ^к	 Jan-Dec	 		 		None	
Fics, graver	¢ 	 Jan-Dec 		!	 	:	None	
298049 Wurtsboro, extremely stony	υ	Jan-Mar Nov-Dec	1 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2.0			None None	
298050 Wurtsboro, extremely stony	υ	Jan-Mar		0.0			None	
Swartswood, extremely stony	υ	Nov-Dec Jan-Dec 	n	D N	 		None None	
298051 Wurtsboro, extremely stony	υ	Jan-Mar	. H . G	0.0	 		None	
Swartswood, extremely stony	υ	Jan-Dec		D			None Bone	
298075 Colonie	⋖	Jan-Dec	 				None	

Table 19. -- Water Features -- Continued

	<u> </u>											
	Frequency		None	None None	None	None	None	None	None	None	None	None
Ponding	Duration									<u> </u>		
	Surface water depth	Ft	 	 		: 	 		 	 	 	
table	Lower limit	Ft	!				!			!	 	
Water	Upper limit	F	!									
	Month		Jan-Dec	Jan-Dec	 Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
	Hydro- logic group	υ	υ	υ	υ	υ						
	National symbol and soil name	298188 Lackawanna, extremely stony	298189 Lackawanna, extremely stony	298221 Swartswood, extremely stony	298222 Swartswood, extremely stony	298223 Swartswood, extremely stony	298255 Delaware, rarely flooded	298256 Delaware, rarely flooded	298257 Wallpack	298258 Wallpack	298259 Wallpack, extremely stony	298260 Wallpack, extremely stony

Table 19. -- Water Features -- Continued

National symbol Hydro Month Upper Linut Linut Aster Linut Aster Linut Linut Aster Linut Linut Aster Linut Linut Aster Linut Li				Water	table		Ponding		
10, extremely stony————————————————————————————————————	National symbol and soil name	Hydro- logic group	Month	Upper limit	Lower	Surface water depth	Duration	Frequency	
sck, extremely stony D Jan-May 0.5 1.3 Jo, extremely stony D Jan-May 0.5 1.3 Swood, extremely stony C Jan-Dec Swood, extremely stony C Jan-Dec Swood, extremely stony C Jan-Dec Swood, extremely stony C Jan-Dec Swood, extremely stony B Jan-Dec Swood, extremely stony B Jan-Dec Swood, extremely stony B Jan-Dec Sylvery stony B Jan-Dec Sylvery stony B Jan-Dec Sylvery stony B Jan-Dec Sylvery stony Sylvery stony	298261 Wallpack	ф	, , , , , , , , , , , , , , , , , , ,	E C	Ft	Ft			
90, extremely stony	298262 Wallpack, extremely stony	М	Jan-Dec			 		None — —	
90, extremely stony	298265 Venango, extremely stony	Д	 - Jan-May Nov-Dec	0.0	1.3			None None	
swood, extremely stony	298266 Venango, extremely stony	A	 Jan-May Nov-Dec	0 0 2 2	1.3			None None	
swood, extremely stony	298409 Swartswood, extremely stony	υ	 Jan-Dec			 		None	
swood, extremely stony	298411 Swartswood, extremely stony	υ	 - Jan-Dec			 		None	
c, very stony	298413 Swartswood, extremely stony	υ	 Jan-Dec	 	!	 	!	None	
c, very stony			: :	· ·	!	· ·	! !		
c, very stony	318498 Hazen, very stony	Д		 		 	!	None	
, very stony	Hoosic, very stony	М	Jan-Dec		-		-	None	
stony	318533 Hazen, very stony	ф	 - Jan-Dec	 		 	!	 	
	Hoosic, very stony	щ	 Jan-Dec		-			None	

Table 19. -- Water Features -- Continued

	<u> </u>										
	Frequency	Frequent	None	Frequent Frequent	None None	None None	None	None	None None	None None	None None None
Ponding	Duration	Very long		Very long Very long							
	Surface water depth	Ft 0.0-1.0		10.0-0.51 10.0-0.51			 	 	 	 	
table	Lower limit	Ft 5.0	5.0	5.0	1.9 9.0	2 2	-		8 . 8 . 8	8 . 8 . 8 .	4 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Water	Upper limit	Ft 0.0	1 1 2 2 2	0.0	e. 0 0	1.7	:		1.7	1.7	m.o.m.m.
	Month	Jan-Jun Sep-Dec	Jan-Jun	Jan-Jun Sep-Dec	Jan-Jun	Jan-Mar Nov-Dec	Jan-Dec	Jan-Dec	Jan-Mar Nov-Dec	Jan-Mar Nov-Dec	Jan-Feb Mar-Apr May Nov-Dec
	Hydro- logic group	B/D	Δ .	B/D	Δ .	υ 	υ	υ 	υ	υ	ρ
	National symbol and soil name	319783 Catden		Halsey, very stony	543222 Andover, extremely stony	Buchanan, extremely stony	543243 Berks	Weikert	543246 Buchanan	543247 Buchanan, extremely stony	543257 Chippewa

Table 19. -- Water Features -- Continued

	Frequency	None None	None No	o o o	None None	None	None	None	None –	None
	Fre	ŽŽ	žž žžži 		žž 	ž 	ž . – – – -	ž - – – – -	ž :	
Ponding	Duration						!		!	! ! !
	Surface water depth	F. I	 		 	 			 	
table	Lower	Ft 1.3	H.H.H.) :	>6.0 >6.0	!	!	0.9	0.9<	9
Water	Upper limit	Ft 0.3			m m			9 2.	. s	
	Month	Jan-Feb Mar-Apr	May Nov-Dec Jan-Feb Mar-Apr May	Jan-Dec	Jan-Mar Nov-Dec	Jan-Dec	Jan-Dec	Jan-Mar	Jan-Mar	Tan-Mar
	 Hydro- logic group	Δ	Δ		Δ	д — — — — —		υ	υ	υ
	National symbol and soil name	543258 Chippewa	543259 Chippewa, extremely stony	543271 Delaware	543276 Fluvaquents	543292 Hazleton, extremely stony	543293 Hazleton, extremely stony	543299 Laidig, extremely stony	Jajou	543304 Laidig

Table 19. -- Water Features -- Continued

	<u> </u>	<u> </u>										
	Frequency	None	 None None	None		None	None None	None	None None None	None None	None None	None
Ponding	Duration				;	! ! !						
	Surface water depth	Ft	 		 			 	 			
table	Lower limit	Ft.	. w . v	. s. s. 5	יר	3.5	2 .3	ა	2.3	. s . s	. s. s.	2 .2 .3 .3
Water	Upper limit	E	 	8 8	 «	2	2 2 .0 .0 .		8 0.0	1 T . O . T .	11.0	0 . 0 .
	Month	Jan-Dec	 Jan-Mar Nov-Dec	Jan-Mar Nov-Dec		Nov-Dec	Jan-Mar Nov-Dec	 	Nov-Dec Jan-Mar Nov-Dec	Jan-May Nov-Dec	Jan-May Nov-Dec	Jan-Mar Nov-Dec
	Hydro- logic group	- 4	υ 	υ	υ	υ		υ	υ	υ	υ	υ
	National symbol and soil name	543318 Rubble land	543327 Swartswood	543328 Swartswood	543330 Swartswood, extremely stony	Wurtsboro, extremely stony		543331 Swartswood, extremely stony	Wurtsboro, extremely stony	543359 Volusia	543360 Volusia, extremely stony	543374 Wurtsboro

Table 19. -- Water Features -- Continued

			Water	table		Ponding		1
National symbol and soil name	Hydro- logic group	Month	Upper limit	Lower	Surface water depth	Duration	Frequency	1
543375 Wurtsboro	υ	Jan-Mar Nov-Dec	Ft 2.0	Ft 2.3	F. I		None None	i
612280 Scio	υ	 March April May	8 8 8 8	0.0.0			None None None	
612666 Colonie	∢	 - Jan-Dec				:	None	
G12668 Hoosic, very stony	м м	 - Jan-Dec			 	:	None	
7	· - — —	Jan-Dec				:	None	
Lordstown, very rocky	υ ¤	 Jan-Dec					None	
	a 	Jan-Dec		-		!	None	
612732 Atherton, very poorly drained	B/D	Jan-Jun Jul-Oct	0 1 0	τ) π . . α	0.0-0.5	Long	Frequent Frequent	
Atherton, poorly drained	B/D	Jan-Jun Nov-Dec	0 0 0	. v.v.		D	None None None	
612738 Fluvaquents, occasionally flooded	B/D	 Jan-May June Sep-Oct Nov-Dec	0 0 	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			None None None	
612753 Wallpack, aeolian mantle, very stony-	м	 Jan-Dec 					None	

Table 19. -- Water Features -- Continued

		<u> </u>													
	Frequency		None	None	None None	None	Frequent Frequent	None	None	None	None None	None	None		
Ponding	Duration						Very long								
	Surface water depth	Ft	 	 	· 		10.0-1.0	 ¦	 			 ¦			
table	Lower limit	Ft		-	2. 2. 4. 4.	2. 2 4. 4.	5.0	!		0.	0		-		
Water	Upper limit	Ft			0.0	0.0	0.0.			1.5	1.5				
	Month		Jan-Dec	Jan-Dec	Jan-Mar Nov-Dec	Jan-Mar Nov-Dec	Jan-Jun Nov-Dec	Jan-Dec	Jan-Dec	Jan-Mar	Nov-Dec Jan-Dec	Jan-Dec	Jan-Dec		
	Hydro- logic group		Д	щ	υ	υ	Δ			υ	υ	Δ	υ		
	National symbol and soil name	612756	Wallpack, aeolian mantle, very stony-	612757 Wallpack, aeolian mantle, very stony-	612767 Wellsboro, extremely stony	612768 Wellsboro, extremely stony	613393 Alden, extremely stony	613447 Unadilla	613448 Unadilla	614075 	Swartswood, extremely stony	 Arnot, very rocky 	Lordstown, very rocky		

Table 19. -- Water Features -- Continued

			Water	table	_	Ponding		
	_ :							
National symbol and soil name	Hydro- logic group	Month 	Upper limit 	Lower limit	Surface water depth	Duration	Frequency -	
	1							
620180				Ft	_ F 			
Arnot	Δ	L.Tech.		 		! !		
Lordstown	υ 							
		Jan-Dec		!		!	None	
Acces of the second	a 	Jan-Dec				-	None	
620181	- - -							
	a (Jan-Dec	 	-		!	None	
Lordstown	- –	 Jan-Dec	 ¦	!	 	!	None	
Rock outcrop	Δ	 Jan-Dec				!	None	
ozsugy Chippewa, extremely stony	Ω		 -	-		Z.O.T		
		Nov-Dec	000	1	10.0-0.51	Long	Frequent	
623109 Farmington	Δ							
0000 to 1000 d		Jan-Dec				-	None	
rock outcitoff	a 	Jan-Dec		!		-	None	
624811 Galway, very rocky	υ	- - Tan-Dec	 	;	 	! !	edoN	
624813								
Lackawanna, extremely stony	υ 	 Jan-Dec 		!	· ·	!	None	
624816 Lordstown, very rocky	υ 							
Wallback very rocky		Jan-Dec 	 ¦ 		 	!	None	
7	n -	Jan-Dec	:	-	 	!	None	
624822 Lordstown	υ 							
		Jan-Dec		-		!	None	
ייייייייייייייייייייייייייייייייייייייי	a -	Jan-Dec		!		!	None	
	_	_	_		_		_	

Table 19. -- Water Features -- Continued

Table 19. --Water Features--Continued

			Water	table		Ponding		
National symbol and soil name	Hydro-	Month	Upper	Lower	Surface water	Duration	Frequency	
	group				depth			
624841			Ft	Ft	Ft			
Rock outcrop	Δ	Jan-Dec	 	!			None	
624845 Rock outcrop	Ω							
in the second se	-	Jan-Dec					None	
Farmingcon	a (Jan-Dec					None	
cal way	ט - - -	Jan-Dec					None	
624846 Rock outcrop	Д							
+ (can 4		Jan-Dec		!		<u>-</u> -	None	
ALICCIO	- i	Jan-Dec		-			None	
Numbre Land	<u> </u>	Jan-Dec					None	
626816 Udifluvents, occasionally flooded	₫	Jan-Jun		>6.0			None	δ
		Nov-Dec	ო. ლ.	>6.0			None	>
635458 Oquaga, very rocky	υ	ר מר.	 ¦	!		 ! !		
Lackawanna, very rocky	υ	Jan-Dec					None	
635459 Oquaga, very rocky	υ	, , , ,	: :	!				
Lackawanna, very rocky	υ	Jan-Dec					None e	
740953 Delaware, rarely flooded		Jan-Dec					None	
740968 Nassau, very rocky	Д	Jan-Dec	 	!	 	:	None	
Manlius, very rocky	υ 	Jan-Dec					None	
	_		_		_	_	_	

Table 19. --Water Features--Continued

			Water	table		Ponding		
National symbol and soil name	Hydro- logic group	Month	Upper	Lower limit	Surface water depth	Duration	Frequency	
740060			Ft	Ft	Ft			
/*Ussau, very rocky	Ω		 ;	;		- - -		
Manlius, very rocky	υ 	Jan-Dec					None	
740971 Oquaga, very rocky	υ 	, ,						
Lackawanna, very rocky	υ	Jan-Dec Jan-Dec			 		None None	
740972 Oquaga, very rocky	υ 	, , , , , , , , , , , , , , , , , , ,						
Lackawanna, very rocky	υ 	Jan-Dec					None None	
740974 Oquaga	υ 							
Rock outcrop	Δ	Jan-Dec Jan-Dec					None	
740975 Rock outcrop	Δ							
Arnot	Δ	Jan-Dec Jan-Dec	 		 		None	
Rubble land	Δ	Jan-Dec		-			None	
740987 Scio	υ	 Mar-May	1.8	0.94			None	
740988 Udifluvents, occasionally flooded	⋖	Jan-Jun Nov-Dec		0.9 .0.9 .0.9			None None	> >
740991 Unadilla	м	Jan-Dec		}			None	

Table 19. -- Water Features -- Continued

Jimit limit water depth	
2.0 2.4 2.0 2.4	hydro- logic group
2.0 2.4 2.0 2.4	'
2.0 2.4	д
2.0 2.4	υ
	υ
	υ
	υ
	υ
0.0 5.0 0.0-1.0 Very long 0.0 5.0 0.0-1.0 Very long 0.0 5.0 0.0-1.0 Very long 0.0 0.0 0 0.	Δ
0.0 5.0 0.0-1.0 Very long 0.0 5.0 0.0-1.0 Very long 0.0 5.0 0.0-1.0 Very long 0.0	υ
0.0 5.0 0.0-1.0 Very long 0.0 5.0 0.0-1.0 Very long	Δ
	<u></u> -
	о <u>-</u> -
	υ

Table 19. -- Water Features -- Continued

		_	Water	table	_	Ponding		
National symbol and soil name	 Hydro- logic group	Month	Upper limit	Lower	Surface water depth	Duration	Frequency	
077770			Ft	Ft	Ft		_'	
Arnot	Δ							
Lordstown	ບ	Jan-Dec 	 	<u> </u>	 	 	None –	
		Jan-Dec			. - .	:	None	
kock outcrop	a 	Jan-Dec		¦ 	 	:	None	
1147469 Arnot								
		Jan-Dec				:	None	
LOI GS COMII	ر ـ ـ	 Jan-Dec				:	None	
Rock outcrop	Δ	 Jan-Dec		¦			None	
1147470 Atherton, very poorly drained	B/D							
		Jan-Jun	0.0	5.8	10.0-0.51	Long	Frequent	
		Jul-Oct Nov-Dec	0.0	5.8	10.0-0.5	Long	Frequent Frequent	
Atherton, poorly drained	д/в 	 Jan-Jun	0.2	5.0			None	
		Nov-Dec	0.2	5.0	 		None	
1147471 Catden	B/D	Jan-Jun Sep-Dec	0.0	5.0	 	Very long	Frequent Frequent	
1147474 Chippewa, extremely stony	Δ	Jan-Jun Nov-Dec	0.0		10.0-0.5	Long	Frequent Frequent	
1147475 Colonie	∢		 	; 	 ¦			
1147478 Delaware, rarely flooded	м				 			
			_					

Table 19. -- Water Features -- Continued

	Frequency		None	 Frequent Frequent	· — — ·	None None		None None		None	None	None -	None	None	None None	
Ponding	Duration Fr			- lgno	. – – –											
	Surface D water depth	Ft		10.0-0.51 V								 				_
table	Lower	Ft	5.0							!			0.0	0.0	0	
Water	Upper limit	Ft	2.1	0.0									1 1 5 5	н . го г	1.5	
	Month		Jan-Jun Oct-Dec	Jan-Jun Sep-Dec		Jan-Dec Jan-Dec		Jan-Dec Jan-Dec		Jan-Dec	Jan-Dec	Jan-Dec	Jan-Mar Nov-Dec	Jan-Mar	Nov-Dec Jan-Dec	
	Hydro- logic group		Δ	B/D	ф		д					υ	υ	υ	υ	_
	National symbol and soil name		114/48Z Fredon, very stony	Halsey, very stony	1147485 Hazen, very stony	Hoosic, very stony	 1147490 Hoosic, very stony	Hazen, very stony	1147491 Hoosic, very stony	Otisville, very stony		1147492 Lackawanna, extremely stony	1147500 Wurtsboro, extremely stony	1147501 Wurtsboro, extremely stony	Swartswood, extremely stony	

Table 19. -- Water Features -- Continued

	_		Weter total	+ o [\(\)		Donding	-	- 1
			4	במסו		51104		
National symbol and soil name	Hydro- logic group	Month	Upper limit	Lower	Surface water depth	Duration	Frequency	l
1147502			Ft	Ft	Ft			1
Swartswood, extremely stony	υ	 Jan-Dec		:		-	None	
1147527 Udorthents	Δ							
Urban land	Δ	Jan-Dec 		!		 	None	
		Jan-Dec 	 	!	 	<u> </u>	None	
114/332 Udorthents	Α	 Jan-Dec			 	!	None	
1147533 Wurtsboro, extremely stony	υ	 - - - - - -	 - -	2.0	 		None	
		Nov-Dec	1.5	0 0	 	!	None	
SWAI'USWOOQ, EXCIENTALY SCOMY) 	Jan-Dec			 	!!!	None	
1948749 Arnot	c/p	 Jan-Dec		:	 		None	
1948750 Arnot	C/D	 Jan-Dec	 	;	 	!	None	
1948751 Arnot	c/p	 Jan-Dec					None	
1948774 Conotton	м 	 Jan-Dec			 		None	
1948775 Conotton	м 	 Jan-Dec			 		None	
1948776 Conotton	м — — — —	 Jan-Dec 	 		 		None	

Table 19. -- Water Features -- Continued

			Water table 	table		Ponding		
National symbol and soil name	Hydro- logic group	Month	Upper	Lower limit	Surface water depth	Duration	Frequency	
1948777			Ft	Ft	Ft			
Conotton	м	 Jan-Dec				-	None	
1948797 Manlius	υ	 Jan-Dec				!	None	
1948802 Manlius	υ 	 Jan-Dec				!	None	
1948818 Manlius	υ 	 Jan-Dec					None	
1948832 Penargyl	м	Jan-Dec		 		!	None	
1948846 Phelps	μ	 Mar-May	1.8	0. 9<			None	
1948855 Udorthents, loamy	A/D	Jan-Jun Nov-Dec	1.7	0.9 %			None None	
1948989 Urban land	¦ 		 	 	 	!	eucN	
Delaware	м	Jan-Dec	 		;		None	
	_	_	_		_		_	

Table 20.--Soil Features

[See text for definitions of terms used in this table. Absence of an entry indicates that data were

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for for frost action	ū
9r8000		In	In			
Hoosic, very stony	No restriction			!	Low	
Otisville, very stony	No restriction		:	-	Low	
Hazen, very stony	No restriction			-	Moderate	
296265 Alden	No restriction			!	High	
296269 Fluvents, (alluvial land)	No restriction		 ¦	!	Moderate	
но11у	No restriction				High	
296271 Alvira	Fragipan	15-28	12-65	Noncemented	High	
Watson	Fragipan	18-32		Noncemented	Moderate	Σ
Shelmadine	Fragipan	18-30	10-42	Noncemented	High	
296272 Bath	Fragipan	21-38	20-60	Noncemented	Moderate	Σ
Lackawanna	No restriction				Moderate	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
296273 Bath	Fragipan	21-38	20-60	Noncemented	Moderate	Σ
Lackawanna	No restriction			-	Moderate	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
296274 Bath	Fragipan	21-38	20-60	Noncemented	Moderate	Σ
Lackawanna	No restriction			-	Moderate	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate 	Σ

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	frost action	P
296275		In 10	nI l	N.	4	2
Dati.	- radipan	06-17	000	NOTICELLEGIC	- אסמפושרש 	4
296276 Bath	Fragipan	21-38	20-60	Noncemented	 Moderate	Σ
296277 Benson	Lithic bedrock	12-20		Very strongly cemented	 Moderate 	
Rock outcrop	Lithic bedrock	0		Very strongly cemented		
296278 Benson	Lithic bedrock	12-20		Very strongly cemented	 Moderate 	
Rock outcrop	Lithic bedrock	0		Very strongly cemented		
296279 Benson	Lithic bedrock	12-20		Very strongly cemented	Moderate	
Rock outcrop	Lithic bedrock	0		Very strongly cemented		
296280 Braceville	Fragipan	18-30		Noncemented	 Moderate	Σ
Rexford, poorly drained	No restriction			-	 High	
296281 Braceville	Fragipan	18-30		Noncemented	Moderate	Σ
Rexford, poorly drained	Fragipan	15-24	13-35	Noncemented	 High	
296283 Buchanan	Fragipan	20-36	09-9	Noncemented	Moderate	
Shelmadine	Fragipan	18-30	10-42	Noncemented	High	
296288 Chippewa	Fragipan	10-24	12-50	Noncemented	High	
Norwich	Fragipan	10-24	12-50	Noncemented	High	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for frost action	ū
		In	In			
Zyozay Chippewa	Fragipan	10-24	12-50	Noncemented	High	
Norwich	Fragipan	10-24	12-50	Noncemented	High	
296295 Udorthents, cut and fill	No restriction		 			
296297 Deka1b	Lithic bedrock	20-40		Very strongly cemented	Low	
296298 Dekalb	Lithic bedrock	20-40		Very strongly cemented	Low	
296303 Hazleton	Lithic bedrock	40-96		Very strongly cemented	Moderate	
296304 Holly	No restriction				High	
296311 Lackawanna	Fragipan	21-36	 	Noncemented	Moderate	
Bath	Fragipan	21-38	20-60	Noncemented	Moderate	Σ
Lordstown	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Wellsboro	Fragipan	14-26	14-65	Noncemented	High	
296312 Lackawanna	Fragipan	17-36		Noncemented	Moderate	
Bath	No restriction		:	-	Moderate	Σ
Wellsboro	Fragipan	14-26	14-65	Noncemented	High	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for for frost action	n
		In	In			
Z9051.5 Lackawanna	Fragipan	17-36		Noncemented	Moderate	
Bath	No restriction			-	Moderate	Σ
Lackawanna	No restriction			-		
296315 Lackawanna	Fragipan	21-36		Noncemented	 Moderate	
Bath	No restriction			-	Moderate	Σ
Wellsboro	Fragipan	14-26	14-65	Noncemented	High	
296316 Lackawanna	Fragipan	21-36		Noncemented	Moderate	
Bath	No restriction			-	Moderate	Σ
Wellsboro	Fragipan	14-26	14-65	Noncemented	Moderate	
296317 Laidig	Fragipan	30-50	10-50	Noncemented	 Moderate	Σ
296326 Lordstown	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Arnot	Lithic bedrock	10-20		Very strongly cemented	Moderate	
Bath	No restriction			!	Moderate	Σ
Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
296327 Lordstown	Lithic bedrock	20-40		Very strongly cemented	 Moderate	
Arnot	Lithic bedrock	10-20		Very strongly cemented	Moderate	
Bath	No restriction			-	Moderate	Σ
Oquaga	Lithic bedrock	20-40	 ¦	Very strongly cemented	Moderate 	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
	Kind	Depth to top	th top Thickness 	Hardness	for for frost action	ū
296328 Lordstown	Lithic bedrock	In 20-40	In	Very strongly	Moderate	
Oquaga	Lithic bedrock	20-40	 	cemented Very strongly cemented	 Moderate 	
296329 Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Volusia	Fragipan	11-22	28-69	Noncemented	 High	
Chippewa	Fragipan	10-24	12-50	Noncemented	 High	
Bath	No restriction				Moderate	Σ
296330 Mardin	Fragipan	14-26	14-65	Noncemented	 Moderate	Σ
Volusia	Fragipan	11-22	28-69	Noncemented	 High	
Bath	No restriction			-	Moderate	Σ
Chippewa	Fragipan	10-24	12-50	Noncemented	 High	
296331 Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Lordstown	Lithic bedrock	20-40		Very strongly cemented	 Moderate 	
Volusia	Fragipan	11-22	28-69	Noncemented	 High	
Chippewa	Fragipan	10-24	12-50	Noncemented	 High	
296332 Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Lordstown	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Volusia	Fragipan	11-22	28-69	Noncemented	High	
Chippewa	Fragipan	10-24	12-50	Noncemented	High	
296335 Meckesville	Fragipan	25-48	10-55	Noncemented	Moderate	Σ

Table 20. -- Soil Features -- Continued

		Restrict	Restrictive laver			
Map unit symbol					Potential	
and soil name	Kind	Depth to top 	Depth to top Thickness 	Hardness	for for frost action	D
296337		In	In			
Meckesville	Fragipan	25-48	10-55	Noncemented	Moderate	Σ
296338 Morris	Fragipan	11-22	26-69	Noncemented	High	
Norwich	Fragipan	10-24	12-50	Noncemented	High	
296339 Morris	Fragipan	11-22	26-69	Noncemented	High	
Norwich	Fragipan	10-24	12-50	Noncemented	High	
296340 Morris	Fragipan	11-22	26-69	Noncemented	High	
Norwich	Fragipan	10-24	12-50	Noncemented	High	
296341 Freetown, mucky peat	No restriction				High	
296342 Paupack, mucky peat (shallow)	No restriction	 			High	Σ
296343 Oquaga	Lithic bedrock	20-40	 	Very strongly cemented	Moderate	
Lackawanna	Fragipan	21-36		Noncemented	 Moderate	
296344 Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Lackawanna	Fragipan	21-36		Noncemented	Moderate	
296346 Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
 Lackawanna	Fragipan	21-36		Noncemented	Moderate	
296347 Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Lackawanna	Fragipan	21-36		Noncemented	Moderate	

Table 20. -- Soil Features -- Continued

Man inni + evmbol		Restrict	Restrictive layer		Dottontial	
	Kind	Depth to top	Depth to top Thickness	Hardness	frost action	<u> </u>
296348		In	In			
Philo	Lithic bedrock	48-99		Very strongly cemented	Moderate	
Holly	No restriction				High	
296349 Pope	No restriction			!	Moderate	
но11у	No restriction			-	High	
296350 Pope	No restriction			!	Moderate	
Holly	No restriction	· ·		!	High	
296351 Rexford, somewhat poorly drained	Fragipan	15-24	13-35	Noncemented	 High	
Rexford, poorly drained	Fragipan	15-24	13-35	Noncemented	High	
296355 Sheffield	Fragipan Paralithic bedrock	15-26 48-99		Noncemented Moderately cemented	High	
296363 Dystrochrepts, very stony	Lithic bedrock	40-40		Very strongly cemented	Moderate	
296369 Wayland	No restriction				High	
296376 Wellsboro	Fragipan	14-26	14-65	Noncemented	High	
Morris	Fragipan	11-22	26-69	Noncemented	High	
Norwich	Fragipan	10-24	12-50	Noncemented	High	
Lackawanna	No restriction	:		-	Moderate	
296379 Wellsboro	Fragipan	14-26	14-65	Noncemented	High	
Lackawanna	No restriction	 			Moderate 	

Table 20. -- Soil Features -- Continued

Men the state of t		Restrict	Restrictive layer			
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for action	D
0 000		In	In			
Z963/9 Norwich	Fragipan	10-24	12-50	Noncemented	High	
Morris	Fragipan	11-22	26-69	Noncemented	High	
296385 Wyoming	No restriction				Low	
Braceville	No restriction			-	Moderate	Σ
Unadilla	No restriction			-	High	
296386 Wyoming	No restriction			!	Low	
Braceville	No restriction				Moderate	Σ
Unadilla	No restriction			!	High	
296387 Wyoming	No restriction			-	Low	
Braceville	No restriction			;	Moderate	Σ
Unadilla	No restriction			!	High	
296388 Wyoming	No restriction				Low	
Unadilla	No restriction			!	High	
296389 Wyoming	No restriction			!	Low	
296390 Water	No restriction			!		
297185 Edgemere	Fragipan	15-25		Noncemented	High	
Shohola	Fragipan	18-30		Noncemented	High	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Freetown	No restriction			!	High	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrictive	ive layer		Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for frost action	P
201100		In	In			
Z9/180 Edgemere	Fragipan	15-25		Noncemented	High	
Shohola	Fragipan	15-31		Noncemented	High	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Freetown	No restriction		:		High	
Wyalusing	No restriction				High	
297188 Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Arnot	Lithic bedrock	10-20		Very strongly cemented	Moderate	
Rock outcrop	No restriction		:	;		
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Rubble land	No restriction		:			
297189 Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Arnot	Lithic bedrock	10-20	 ¦	Very strongly cemented	Moderate	
Rock outcrop	No restriction					
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Rubble land	No restriction			-		
297190 Braceville	Fragipan	15-30	 ¦	Noncemented	Moderate	Σ
Wyoming	No restriction		:		Low	
Chenango	No restriction		:	:	Moderate	
Rexford, poorly drained	Fragipan	15-24	13-35	Noncemented	High	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for for	D
		In	In			
Z9/191 Wyalusing	No restriction				High	
Barbour	No restriction			-	Moderate	
Craigsville	No restriction		:	-	Moderate	
Pope	No restriction		:	-	Moderate	
297192 Pope	No restriction			!	Moderate	
Wyalusing	No restriction				High	
297193 Paupack	No restriction			!	High	Σ
Edgemere	Fragipan	15-25		Noncemented	High	
Kimbles	No restriction				High	
297196 Freetown	No restriction			!	High	
Gleneyre	No restriction			-	High	
297197 Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Edgemere	Fragipan	15-25	:	Noncemented	 High 	
297198 Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Edgemere	Fragipan	15-25		Noncemented	High	
Rock outcrop	No restriction			!		
297201 Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	

Table 20. -- Soil Features -- Continued

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for frost action	D
		In	In			
zy/zlu Barbour	No restriction			-	Moderate	
Pope	No restriction			-	Moderate	
Philo	No restriction			-	Moderate	
Delaware	Lithic bedrock	72-99	· ¦	Very strongly cemented	Moderate	
297216 Wurtsboro	Fragipan	17-28		Noncemented	 Moderate	
Edgemere	Fragipan	15-25	· ¦	Noncemented	High	
Shohola	Fragipan	15-31		Noncemented	High	
Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
297217 Wurtsboro	Fragipan	17-28	 ¦	Noncemented	 Moderate	
Oquaga	Lithic bedrock	20-40	· ¦	Very strongly cemented	Moderate	
Rock outcrop	No restriction			-		
Edgemere	Fragipan	15-25		Noncemented	High	
Shohola	Fragipan	15-31		Noncemented	High	
297227 Arnot	Lithic bedrock	10-20	 	Very strongly cemented	Moderate	
Rock outcrop	No restriction			-		
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Lackawanna	No restriction			-	Moderate	
297228 Arnot	Lithic bedrock	10-20		Very strongly cemented	Moderate	
Rock outcrop	No restriction					

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	frost action	D
907798		In	In			
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Swartswood	Fragipan	28-36	:	Noncemented	Moderate	
297229 Wyoming	No restriction		:		Low	
 	Lithic bedrock	72-99		Very strongly cemented	Moderate	
Braceville	No restriction				Moderate	Σ
Suncook	No restriction				Low	
297230 Wyoming	No restriction				Low	
Delaware	Lithic bedrock	72-99		Very strongly cemented	Moderate	
 	No restriction				Moderate	Σ
Suncook	No restriction				Low	
297231 Wyoming	No restriction				Low	
Suncook	No restriction				Low	
 	Lithic bedrock	72-99		Very strongly cemented	Moderate	
Braceville	No restriction				Moderate	Σ
297236 Suncook	No restriction				Low	
Wyalusing	No restriction				High	
297237 Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Manlius	Lithic bedrock	20-40	 ¦	Very strongly cemented	Moderate	

Table 20. -- Soil Features -- Continued

		Restrict	Restrictive layer			
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	Forential for	þ
		In	In			
0quaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Edgemere	Fragipan	15-25		Noncemented	High	
Shohola	Fragipan	15-31		Noncemented	High	
297238 Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Edgemere	Fragipan	15-25		Noncemented	High	
Shohola	Fragipan	15-31	- - -	Noncemented	High	
297239 Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Edgemere	Fragipan	15-25		Noncemented	High	
Shohola	Fragipan	15-31		Noncemented	High	
297240 Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Oquaga	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Edgemere	Fragipan	15-25	 	Noncemented	High	
Shohola	Fragipan	15-31		Noncemented	High	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for frost action	D
297241		In	In			
Unadilla	No restriction	:	:	-	High	
Braceville	No restriction			-	Moderate	Σ
SuncookS	No restriction	:			Low	
297242 Shohola	Fragipan	18-30		Noncemented	High	
Edgemere	Fragipan	15-25		Noncemented	High	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
297243 Shohola	Fragipan	18-30	:	Noncemented	High	
Edgemere	Fragipan	15-25		Noncemented	High	
Mardin	Fragipan	14-26	14-65	Noncemented	Moderate	Σ
297244 Lordstown	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Swartswood	Fragipan	28-36		Noncemented	Moderate	
Arnot	Lithic bedrock	10-20	!	Very strongly cemented	Moderate	
Rock outcrop	No restriction			!		
Shohola	Fragipan	15-31		Noncemented	High	
297247 Chenango	No restriction		 ! !		Moderate	
Delaware	Lithic bedrock	72-99	!	Very strongly cemented	Moderate	
Braceville	No restriction			-	Moderate	Σ
Philo	No restriction	 	:	!	Moderate	
Unadilla	No restriction	 	:		High	

Table 20. -- Soil Features -- Continued

Man innit symbol		Restrict	Restrictive layer		- Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	frost action	Þ
		In	In			
29/248 Chenango	No restriction			ļ	Moderate	
Delaware	Lithic bedrock	72-99		Very strongly cemented	Moderate	
Unadilla	No restriction			;	High	
297249 Chenango	No restriction			!	Moderate	
Delaware	Lithic bedrock	72-99		Very strongly cemented	Moderate	
Unadilla	No restriction			!	High	
297253 Craigsville	No restriction		 ¦	!	 Moderate	
Wyoming	No restriction				Low	
Wyalusing	No restriction			-	High	
Philo	No restriction				Moderate	
Pope	No restriction			-	Moderate	
297254 Pits, shale	Paralithic bedrock	0-2		Very strongly cemented	Low	
Pits, gravel	No restriction			:	Low	
298049 Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
298050 Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
298051 Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for frost action	n
298051		In	In			
Swartswood, extremely stony	rragipan	20-36	24-40	Noncemented	Moderate	
298075 Colonie	No restriction				Low	
Delaware	No restriction				Moderate	
Unadilla	No restriction				High	
298188 Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Oquaga, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	Σ
298189 Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Oquaga, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	Σ
298221 Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
298222 Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
298223 Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
Arnot, extremely stony	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lordstown, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	
298255 Delaware, rarely flooded	No restriction				Moderate	
Colonie	No restriction	 -		!	Low	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		Potential	
soil	Kind	Depth to top	Depth to top Thickness	Hardness	for for frost action	n
298255		In	In			
Unadilla	No restriction			!	High	
298256 Delaware, rarely flooded	No restriction			-	Moderate	
Colonie	No restriction			!	Low	
Unadilla	No restriction			-	High	
298257 Wallpack	Fragipan	12-36	29-53	Noncemented	Moderate	
Cambridge	Fragipan	12-36	29-53	Noncemented	Moderate	
Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
298258 Wallpack	Fragipan	12-36	29-53	Noncemented	Moderate	
Cambridge	Fragipan	12-36	29-53	Noncemented	Moderate	
Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
298259 Wallpack, extremely stony	Fragipan	12-36	24-48	Noncemented	 Moderate	
Cambridge, extremely stony	Fragipan	12-36	23-47	Noncemented	Moderate	
Lordstown, extremely stony	Lithic bedrock	20-39	:	Indurated	Moderate	
298260 Wallpack, extremely stony	Fragipan	12-36	24-48	Noncemented	Moderate	
Cambridge, extremely stony	Fragipan	16-30	10-36	Noncemented	Moderate	
Lordstown, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	
298261 Wallpack	Fragipan	12-36	29-53	Noncemented	Moderate	
Cambridge	Fragipan	12-36	29-53	Noncemented	Moderate	
Lordstown	Lithic bedrock	20-39		Indurated	Moderate 	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	th top Thickness	Hardness	for frost action	P
696000		In	In			_
Z96262 Wallpack, extremely stony	Fragipan	12-36	24-48	Noncemented	Moderate	
Cambridge, extremely stony	Fragipan	16-30	10-36	Noncemented	Moderate	
Lordstown, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	
298265 Venango, extremely stony	Fragipan	14-28	32-46	Noncemented	High	
Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	
298266 Venango, extremely stony	Fragipan	14-28	32-46	Noncemented	High	
Nassau, extremely stony	Lithic bedrock	10-20		Indurated	Moderate	Σ
Manlius, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	Σ
298409 Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
298411 Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
298413 Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
Arnot, extremely stony	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lordstown, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	
318498 Hazen, very stony	No restriction		 		 Moderate	
Hoosic, very stony	No restriction			-	Low	
Otisville, very stony	No restriction	 		-	Low	
318533 Hazen, very stony	No restriction		:	!	 Moderate 	

Table 20. -- Soil Features -- Continued

Man ::nit = exmhol		Restrict	Restrictive layer		 	
soil	Kind	Depth to top	Depth to top Thickness	Hardness	frost action	D
0.00		In	In			
siesis Hoosic, very stony	No restriction		!!!		LOW	
Hero, very stony	No restriction		:		Moderate	
319783 Catden	No restriction			-	High	
Alden	No restriction		:		High	
Wallkill	No restriction			-	 High	
319784 Fredon, very stony	Strongly contrasting textural stratification	22-40	20-38	Noncemented	High	
Halsey, very stony	Strongly contrasting textural stratification	20-40	20-40	Noncemented	High	
Hero, very stony	No restriction				Moderate	
543222 Andover, extremely stony	Fragipan Lithic bedrock	16-28		Noncemented Very strongly cemented	High	
Buchanan, extremely stony	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
Laidig	Fragipan	30-50	!!!	Noncemented	Moderate	Σ
Hazleton	Lithic bedrock	40-80		Very strongly cemented	Moderate	
543243 Berks	Lithic bedrock	20-40		Very strongly cemented	LOW	
Weikert	Lithic bedrock	10-20	 ¦	Very strongly cemented	Moderate 	Σ
			•			

Table 20. -- Soil Features -- Continued

Mes + instruction		Restrict	Restrictive layer			
	Kind	Depth to top	th top Thickness	Hardness	frost action	ū
0.00		In	In			
945245 Bedington	Lithic bedrock	66-09		Very strongly cemented	Moderate	
Comly	Fragipan Lithic bedrock	20-35		Noncemented Very strongly cemented	Moderate	
Brinkerton	Fragipan Lithic bedrock	11-30 60-99		Noncemented Very strongly cemented	High	
543246 Buchanan	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
Andover	Fragipan Lithic bedrock	16-28 72-99		Noncemented Very strongly cemented	Moderate	
Wharton	Lithic bedrock	40-72		Very strongly cemented	High	
Laidig	Fragipan	28-50		Noncemented	Moderate	Σ
543247 Buchanan, extremely stony	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
Andover, extremely stony	Fragipan Lithic bedrock	16-28 72-99		Noncemented Very strongly cemented	Moderate	
Cookport	Fragipan Lithic bedrock	16-30		Noncemented Indurated	Moderate	Σ
Laidig	Fragipan	30-50		Noncemented	Moderate	Σ
Murrill	Lithic bedrock	72-99		Indurated	Moderate	Σ
543257 Chippewa	Fragipan	8-20	8-36	Noncemented	High	
	Fragipan	19-36		Noncemented	Moderate	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	frost action
543257		In	In		
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate
543258 Chippewa	Fragipan	8-20	8-36	Noncemented	High
Swartswood	Fragipan	19-36		Noncemented	Moderate
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate
543259 Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High
Swartswood	Fragipan	19-36		Noncemented	Moderate
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate
543271 Delaware	Lithic bedrock	72-99		Very strongly cemented	 Moderate
Alton	Lithic bedrock	- 66-09		Very strongly cemented	Moderate
Conotton	No restriction			-	Moderate
Hatboro	Lithic bedrock	66-09		Very strongly cemented	High
Nanticoke	Lithic bedrock	72-99	 ¦	Very strongly cemented	Low
543276 Fluvaquents	Lithic bedrock	72-99		Very strongly cemented	High
Towhee	Fragipan Lithic bedrock	20-30	 ¦	Noncemented Very strongly cemented	High

Table 20. -- Soil Features -- Continued

- Louis Aires Com		Restrict	Restrictive layer			
	Kind	Depth to top	Depth to top Thickness	Hardness	for action	D
2007		In	In			
Mount Lucas	Lithic bedrock	66-09		Very strongly cemented	High	
Nanticoke	Lithic bedrock	72-99		Very strongly cemented	Low	
Neshaminy	Lithic bedrock	48-99		Very strongly cemented	Moderate	Σ
543292 Hazleton, extremely stony	Lithic bedrock	40-80		Indurated	Moderate	
BuchananBuchanan	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
543293 Hazleton, extremely stony	Lithic bedrock	40-80		Indurated	Moderate	
Buchanan	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
543299 Laidig, extremely stony	Fragipan	30-50		Noncemented	 Moderate	Σ
Andover	Fragipan Lithic bedrock	16-28		Noncemented Very strongly cemented	High	
Buchanan	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
Hazleton	Lithic bedrock	40-80		Very strongly cemented	Moderate	
543300 Laidig, extremely stony	Fragipan	30-50		Noncemented	Moderate	Σ
Andover, extremely stony	Fragipan Lithic bedrock	16-28		Noncemented Very strongly cemented	High	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for for frost action	D
000000000000000000000000000000000000000		In	In			
543300 Buchanan	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
Hazleton	Lithic bedrock	40-80	 ¦	Very strongly cemented	Moderate	
543304 Laidig	Fragipan	30-50		Noncemented	Moderate	Σ
Rubble land	Lithic bedrock	40-72		Very strongly cemented	None	
Andover	Fragipan Lithic bedrock	16-28		Noncemented Very strongly cemented	High	
Buchanan	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
543318 Rubble land	Lithic bedrock	40-72	 ¦	Indurated	None	
Hazleton	Lithic bedrock	40-80		Very strongly cemented		
Buchanan	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	
Clymer	Lithic bedrock	40-60		Very strongly cemented		
Laidig	Fragipan	30-50		Noncemented	 Moderate 	Σ
543327 Swartswood	Fragipan	20-36		Noncemented	Moderate	
Conotton	No restriction			!	Moderate	
Chippewa	Fragipan	8-20	8-36	Noncemented	High	
Manlius	Lithic bedrock	20-40	 ¦	Very strongly cemented	Moderate	

Table 20. -- Soil Features -- Continued

		Restrict	Restrictive layer			
Map unic symbor and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	Forential frost action	اا
		In	In			
543328 Swartswood	Fragipan	20-36		Noncemented	Moderate	
Conotton	No restriction				Moderate	
Chippewa	Fragipan	8-20	8-36	Noncemented	High	
Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
543330 Swartswood, extremely stony	Fragipan	20-36		Noncemented	Moderate	
Wurtsboro, extremely stony	Fragipan Lithic bedrock	17-28 60-120		Noncemented Very strongly cemented	Moderate	
Conotton	No restriction				Moderate	
Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	
543331 Swartswood, extremely stony	Fragipan	20-36	:	Noncemented	Moderate	
Wurtsboro, extremely stony	Fragipan Lithic bedrock	17-28 60-120		Noncemented Very strongly cemented	Moderate	
Conotton	No restriction				Moderate	
Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	
543359 Volusia	Fragipan	10-22	:	Noncemented	High	
Chippewa	Fragipan	8-20	8-36	Noncemented	High	
Swartswood	Fragipan	19-36		Noncemented	Moderate	
543360 Volusia, extremely stony	Fragipan	10-22	:	Noncemented	High	
Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for for frost action	D
543360		In	In			_
Swartswood	Fragipan	19-36		Noncemented	Moderate	
543374 Wurtsboro	Fragipan	17-28		Noncemented	Moderate	
	Lithic bedrock	60-120		Very strongly cemented		
Chippewa	Fragipan	8-20	8-36	Noncemented	High	
Conotton	No restriction	:		!	Moderate	
HalseyHalsey	No restriction			-	High	
Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Phe1ps	 No restriction	 ¦		!	 High	Σ
543375 Wurtsboro	Fragipan Lithic bedrock	17-28		Noncemented Very strongly cemented	Moderate	
Chippewa	Fragipan	8-20	8-36	Noncemented	 High	
Conotton	No restriction			-	Moderate	
HalseyHalsey	No restriction	:		!	High	
Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Phelps	No restriction			-	High	Σ
612280 Scio	No restriction		 		High	
Unadilla	No restriction			-	High	
Aeric Endoaquepts, postglacial alluvium	No restriction	 			High	
612666 Colonie	No restriction	 		!	Low	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer			
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for for frost action	Þ
ה אסרה מרקה		In	In			
Delaware	No restriction			!	Moderate	
Unadilla	No restriction		:	-	High	
612668 Hoosic, very stony	No restriction		:	-	Low	
Hazen, very stony	No restriction				Moderate	
Otisville, very stony	No restriction			-	Tow	
Colonie, very stony	No restriction				Tow	
612724 Lordstown, very rocky	Lithic bedrock	20-39		Indurated	Moderate	
Wallpack, very rocky	Fragipan	12-36	24-48	Noncemented	Moderate	
Chadakoin, very rocky	Lithic bedrock	39-60		Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated	 ¦	
612732 Atherton, very poorly drained	No restriction		:	-	High	
Atherton, poorly drained	No restriction				High	
Aeric Endoaquepts, postglacial alluvium	No restriction			-	High	
612738 Fluvaquents, occasionally flooded	No restriction			-	High	
Udifluvents, occasionally flooded	No restriction			-	Low	
612753 Wallpack, aeolian mantle, very stony	No restriction		:		Moderate	
Lordstown, very stony	Lithic bedrock	20-39	:	Indurated	Moderate	
Aquic Dystrudepts, aeolian mantle, very stony	No restriction	 	:		Low	
612756 Wallpack, aeolian mantle, very stony	No restriction		!		Moderate	

Table 20. -- Soil Features -- Continued

Man init symbol		Restrict	Restrictive layer		- Potential	
and soil name	Kind	Depth to top	Depth to top Thickness 	Hardness	frost action	D
		In	In			
612/36 Lordstown, very stony	Lithic bedrock	20-39		Indurated	Moderate	
Aquic Dystrudepts, aeolian mantle,	No restriction		:	-	Low	
612757 Wallpack, aeolian mantle, very stony	No restriction		 ¦	;	Moderate	
Lordstown, very stony	Lithic bedrock	20-39		Indurated	Moderate	
Aquic Dystrudepts, aeolian mantle,	No restriction		 ¦	-	Low	
612767 Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Morris, extremely stony	Fragipan	10-30	15-40	Noncemented	High	
Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
612768 Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Morris, extremely stony	Fragipan	12-30	30-48	Noncemented	High	
Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
613393 Alden, extremely stony	No restriction		:	-	High	
Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	
613447 Unadilla	No restriction		· ¦	-	High	
Delaware	No restriction			-	Moderate	
Colonie	No restriction			}	Low	
613448 Unadilla	No restriction		:	!	High	
Delaware	No restriction			-	Moderate	
Colonie	No restriction				Low	

Table 20. -- Soil Features -- Continued

Lodinor Abor. seaM		Restrict	Restrictive layer		4	
	Kind	Depth to top	th top Thickness	Hardness	for action	D D
100		In	In			
6140/5 Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate	
620179 Arnot, very rocky	Lithic bedrock	10-20	:	Indurated	Moderate	Σ
Lordstown, very rocky	Lithic bedrock	20-39		Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated		
620180 Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated		
620181 Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated		
623089 Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	
Alden, extremely stony	No restriction			-	High	
Venango, extremely stony	Fragipan	14-28	32-46	Noncemented	High	
623109 Farmington	Lithic bedrock	10-20	:	Indurated	High	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
Galway	Lithic bedrock	20-39	:	Indurated	Moderate	
624811 Galway, very rocky	Lithic bedrock	20-39	:	Indurated	Moderate	
Farmington, very rocky	Lithic bedrock	10-20		Indurated	High	Σ
Rock outcrop	Lithic bedrock	0		Indurated		

Table 20. -- Soil Features -- Continued

Mar inn + ermhol		Restrictive	ive layer		 	
soil	Kind	Depth to top	Thickness	Hardness	for action	D
624811		In	In			
Wallpack, aeolian mantle, very rocky	No restriction				Moderate	
624813 Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Oquaga, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	Σ
624816 Lordstown, very rocky	Lithic bedrock	20-39	 ¦	Indurated	Moderate	
Wallpack, very rocky	Fragipan	12-36	24-48	Noncemented	Moderate	
Cambridge, very rocky	Fragipan	12-36	23-47	Noncemented	Moderate	
Chadakoin, very rocky	Lithic bedrock	39-60		Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated		
624822 Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
Wallpack	Fragipan	12-36	29-53	Noncemented	Moderate	
Chadakoin	Lithic bedrock	39-60	:	Indurated	Moderate	
Cambridge	Fragipan	12-36	29-53	Noncemented	Moderate	
624823 Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
Wallpack	Fragipan	12-36	29-53	Noncemented	Moderate	
Chadakoin	Lithic bedrock	39-60		Indurated	Moderate	
Cambridge	Fragipan	12-36	29-53	Noncemented	Moderate	
624824 Lordstown	Lithic bedrock	20-39	 	Indurated	Moderate	
Wallpack	Fragipan	12-36	29-53	Noncemented	Moderate	
Chadakoin	Lithic bedrock	39-60		Indurated	Moderate	
Cambridge	Fragipan	12-36	29-53	Noncemented	Moderate 	

Table 20. -- Soil Features -- Continued

Man init avmbol		Restrict	Restrictive layer		Dotential _	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	frost action	Þ
		In	In			
624826 Manlius, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Nassau, very rocky	Lithic bedrock	10-20		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
Wallpack, very rocky	Fragipan	12-36	24-48	Noncemented	Moderate	
624827 Nassau, very rocky	Lithic bedrock	10-20		Indurated	 Moderate	Σ
Manlius, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
624828 Nassau, very rocky	Lithic bedrock	10-20		Indurated	 Moderate	Σ
Manlius, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
624829 Nassau, very rocky	Lithic bedrock	10-20		Indurated	Moderate	Σ
Manlius, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0	:	Indurated	 	
624832 Nassau	Lithic bedrock	10-20		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
Manlius	Lithic bedrock	20-39		Indurated	Moderate	Σ
624841 Oquaga	Lithic bedrock	20-39	:	Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated	 	
Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lackawanna	Fragipan	14-36	20-45	Noncemented	Moderate 	

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for frost action	D
		In	In			
%24845 Rock outcrop	Lithic bedrock	0		Indurated		
Farmington	Lithic bedrock	10-20		Indurated	High	Σ
GalwayGalway	Lithic bedrock	20-39		Indurated	Moderate	
624846 Rock outcrop	Lithic bedrock	0		Indurated		
Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Rubble land	No restriction					
Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
626816 Udifluvents, occasionally flooded	No restriction				Low	
Fluvaquents, occasionally flooded	No restriction			-	High	
635458 Oquaga, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Lackawanna, very rocky	Fragipan	14-36	20-45	Noncemented	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated		
Wellsboro, very rocky	Fragipan	12-30	30-48	Noncemented	Moderate	
635459 Oquaga, very rocky	Lithic bedrock	20-39	:	Indurated	Moderate	Σ
Lackawanna, very rocky	Fragipan	14-36	20-45	Noncemented	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated		
Wellsboro, very rocky	Fragipan	12-30	30-48	Noncemented	Moderate	
740953 Delaware, rarely flooded	No restriction			!	Moderate	
Colonie	No restriction		:	}	Low	
Unadilla	No restriction			1	High	

Table 20. -- Soil Features -- Continued

		Restrict	Restrictive layer			
Map unit symbol and soil name	7000	Depth	Depth	# 6 6 0 0 0	Fotential for frost action	D
		3				
7400gg		In	In			
Nassau, very rocky	Lithic bedrock	10-20	:	Indurated	Moderate	Σ
Manlius, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
740969 Nassau, very rocky	Lithic bedrock	10-20		Indurated	 Moderate	Σ
Manlius, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
740971 Oquaga, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Lackawanna, very rocky	Fragipan	14-36	20-45	Noncemented	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated	 	
Wellsboro, very rocky	Fragipan	12-30	30-48	Noncemented	Moderate	
740972 Oquaga, very rocky	Lithic bedrock	20-39		Indurated	Moderate	Σ
Lackawanna, very rocky	Fragipan	14-36	20-45	Noncemented	Moderate	
Rock outcrop	Lithic bedrock	0	:	Indurated	 	
Wellsboro, very rocky	Fragipan	12-30	30-48	Noncemented	Moderate	
740974 Oquaga	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0		Indurated		
Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lackawanna	Fragipan	14-36	20-45	Noncemented	Moderate	
740975 Rock outcrop	Lithic bedrock	0		Indurated	:	
Arnot	Lithic bedrock	10-20		Indurated	 Moderate 	Σ

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		Potential	
and soil name	Kind	Depth to top	Depth to top Thickness 	Hardness	frost action	P
		In	In			
/409/5 Rubble land	No restriction			-	 	
Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
740987 Scio	No restriction				High	
Unadilla	No restriction			-	 High	
Aeric Endoaquepts, postglacial alluvium	No restriction			-	High	
740988 Udifluvents, occasionally flooded	No restriction	 		!	Low	
Fluvaquents, occasionally flooded	No restriction	 			High	
740991 Unadilla	No restriction	 		!	High	
Delaware	No restriction			-	Moderate	
Colonie	No restriction	 			Low	
740992 Unadilla	No restriction	 			High	
Delaware	No restriction	 			Moderate	
Colonie	No restriction				Low	
740995 Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Morris, extremely stony	Fragipan	12-30	30-48	Noncemented	 High	
Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
740996 Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Morris, extremely stony	Fragipan	10-30	15-40	Noncemented	High	
Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	

Table 20. -- Soil Features -- Continued

		Restrict	Restrictive layer			
Map unit symbol and soil name	Kind	Depth to top	th top Thickness	Hardness	Forential frost action	D
		In	In			
/41149 Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Oquaga, extremely stony	Lithic bedrock	20-39	:	Indurated	Moderate	Σ
741150 Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	Moderate	
Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Oquaga, extremely stony	Lithic bedrock	20-39	!!!	Indurated	Moderate	Σ
801114 Oquaga	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0	:	Indurated		
Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Wellsboro	Fragipan	12-30	30-48	Noncemented	Moderate	
810906 Oquaga	Lithic bedrock	20-39		Indurated	Moderate	Σ
Rock outcrop	Lithic bedrock	0	:	Indurated		
Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Wellsboro	Fragipan	12-30	30-48	Noncemented	Moderate	
1147465 Alden, extremely stony	No restriction			!	High	
Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	
1147467 Arnot, very rocky	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lordstown, very rocky	Lithic bedrock	20-39	:	Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated		
1147468 Arnot	 Lithic bedrock	10-20	 ¦	Indurated	 Moderate 	Σ

Table 20. -- Soil Features -- Continued

Lodmin + ini veM		Restrict	Restrictive layer		— — — — — — — — — — — — — — — — — — —	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for action	D
		In	In			
114/468 Lordstown	Lithic bedrock	20-39		Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated	 	
1147469 Arnot	Lithic bedrock	10-20		Indurated	Moderate	Σ
Lordstown	Lithic bedrock	20-39	:	Indurated	Moderate	
Rock outcrop	Lithic bedrock	0		Indurated	 	
1147470 Atherton, very poorly drained	No restriction			-	High	
Atherton, poorly drained	No restriction				High	
Aeric Endoaquepts, postglacial alluvium	No restriction			!	High	
1147471 Catden	No restriction			-	High	
Alden	No restriction			-	 High	
Wallkill	No restriction				 High	
1147474 Chippewa, extremely stony	Fragipan	8-20	8-36	Noncemented	High	
Alden, extremely stony	No restriction				High	
Venango, extremely stony	Fragipan	14-28	32-46	Noncemented	High	
1147475 Colonie	No restriction		:	-	Low	
Delaware	No restriction			-	Moderate	
Unadilla	No restriction			-	High	
1147478 Delaware, rarely flooded	No restriction		:		Moderate	
Colonie	No restriction				Low	
Unadilla	No restriction			!	 High 	

Table 20. -- Soil Features -- Continued

Lydness + inc. walk		Restrictive	ive layer			
	Kind	Depth to top	th top Thickness 	Hardness	frost action	n
1147482 Fredon, very stony	Strongly contrasting textural	<i>In</i> 22-40	In 20-38	Noncemented	High	
Halsey, very stony	Strongly Strongly contrasting textural stratification	20-40	20-40	Noncemented	High	
Hero, very stony	No restriction			;	Moderate	
1147485 Hazen, very stony	No restriction			-	Moderate	
Hoosic, very stony	No restriction			-	Low	
Otisville, very stony	No restriction	 		-	Low	
1147490 Hoosic, very stony	No restriction				Low	
Hazen, very stony	No restriction				Moderate	
Otisville, wery stony	No restriction		:	-	row	
Colonie, very stony	No restriction		:	-	row	
1147491 Hoosic, very stony	No restriction				Low	
Otisville, very stony	No restriction			-	Low	
Hazen, very stony	No restriction			-	Moderate	
1147492 Lackawanna, extremely stony	Fragipan	14-36	20-45	Noncemented	 Moderate	
Wellsboro, extremely stony	Fragipan	12-30	30-48	Noncemented	Moderate	
Oquaga, extremely stony	Lithic bedrock	20-39		Indurated	Moderate	Σ
1147500 Wurtsboro, extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate	
Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate 	

Table 20. -- Soil Features -- Continued

>	 		Restrict	Restrictive layer		DO to the time of time of time of the time of time of the time of time of time of ------	--	--	---
i	and soil name	Kind	Depth to top	Depth to top Thickness 	Hardness	for action	Þ		
11 47 501			In	In					
oro,	extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate			
Swartswood, extremely	extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate			
1147502 Wurtsboro, e	extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate			
Swartswood,	 Swartswood, extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate			
1147527 Udorthents		No restriction	 		!	Low			
Urban land		No restriction	· ·						
1147532 Udorthents		No restriction			!	Low			
1147533 Wurtsboro, e	extremely stony	Fragipan	17-28	32-43	Noncemented	Moderate			
Swartswood,	extremely stony	Fragipan	20-36	24-40	Noncemented	Moderate			
1948749 Arnot		Lithic bedrock	10-20	 	Very strongly cemented	Moderate			
Bedington		Lithic bedrock	66-09		Very strongly cemented	Moderate			
Wurtsboro		Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate			
1948750 Arnot		Lithic bedrock	10-20	 	Very strongly cemented	Moderate			
Brinkerton		Lithic bedrock	66-09		Very strongly cemented	Moderate			
Wurtsboro		Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate			

Table 20. -- Soil Features -- Continued

Money to the state of the state		Restrict	Restrictive layer		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Kind	Depth to top	th top Thickness	Hardness	frost action	D
1948751		In	In			
Arnot	Lithic bedrock	10-20		Very strongly cemented	Moderate	
Brinkerton	Lithic bedrock	66-09		Very strongly cemented	Moderate	
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate	
1948774 Conotton	No restriction				Moderate	
1948775 Conotton	No restriction				Moderate	
1948776 Conotton	No restriction				Moderate	
1948777 Conotton	No restriction				Moderate	
1948797 Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Arnot	Lithic bedrock	10-20		Very strongly cemented	Moderate	
Conotton	No restriction			-	Moderate	
Loudonville	Lithic bedrock	20-40		Very strongly cemented	Moderate	Σ
Swartswood	Fragipan	19-36	:	Noncemented	Moderate	
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120	¦	Noncemented Very strongly cemented	Moderate	
1948802 Manlius	Lithic bedrock	20-40		Very strongly cemented	Moderate	
Arnot	Lithic bedrock	10-20		Very strongly cemented	Moderate	

Table 20. -- Soil Features -- Continued

Max : rat comp.		Restrict	Restrictive layer			
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for action	D
0000		In	In			
Conotton	No restriction	 	:	!	Moderate	
Loudonville	 Lithic bedrock	20-40		Very strongly cemented	Moderate	Σ
Swartswood	Fragipan	19-36		Noncemented	Moderate	
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate	
1948818 Manlius	 Lithic bedrock	20-40		Very strongly cemented	Moderate	
Arnot	 Lithic bedrock	10-20		Very strongly cemented	Moderate	
Conotton	No restriction			!	Moderate	
Loudonville	Lithic bedrock	20-40		Very strongly cemented	Moderate	Σ
Swartswood	Fragipan	19-36		Noncemented	Moderate	
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120		Noncemented Very strongly cemented	Moderate 	
1948832 Penargyl	 Lithic bedrock	72-99		Moderately cemented	Moderate	
1948846 Phelps	 No restriction	 		!	High	Σ
Halsey	No restriction				High	
Swartswood	Fragipan	19-36		Noncemented	Moderate	
Wurtsboro	Fragipan Lithic bedrock	17-28 48-120	 ¦	Noncemented Very strongly cemented	Moderate	
			•			

Table 20. -- Soil Features -- Continued

Map unit symbol		Restrict	Restrictive layer		 Potential	
and soil name	Kind	Depth to top	Depth to top Thickness	Hardness	for frost action	D
		In	In			
1948833 Udorthents, loamy	No restriction			-	Moderate	Σ
Bedington	Lithic bedrock	66-09	 ! !	Very strongly cemented	Moderate	
Clarksburg	Fragipan Lithic bedrock	20-36	20-36	Noncemented Indurated	Moderate	Σ
Duffield	Lithic bedrock	48-120		Indurated	Moderate	Σ
Lansdale	Lithic bedrock	40-60	 ! !	Very strongly cemented	Moderate	
Readington	Fragipan Lithic bedrock	20-36		Noncemented Very strongly cemented	Moderate	Σ
1948989 Urban land	Lithic bedrock	10-100		Very strongly cemented	None	
Delaware	Lithic bedrock	72-99		Very strongly cemented	Moderate	

Table 21.--Taxonomic Classification of the Soils

Soil name	 Family or higher taxonomic class
Aeric Endoaquepts	 Aeric Endoaguents
	Fine-loamy, mixed, active, nonacid, mesic Mollic Endoaquepts
	Loamy-skeletal, mixed, active, mesic Dystric Eutrudepts
	Fine-loamy, mixed, active, mesic Aeric Fragiaquults
	Fine-loamy, mixed, active, mesic Typic Fragiaquults
Aquic Dystrudepts	Aquic Dystrudepts
Arnot	Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
Barbour	Fine-silty, mixed, active, nonacid, mesic Aeric Endoaquepts Coarse-loamy over sandy or sandy-skeletal, mixed, active, mesic Fluventic
	Dystrudepts
	Coarse-loamy, mixed, active, mesic Typic Fragiudepts
_	Fine-loamy, mixed, active, mesic Typic Hapludults Loamy-skeletal, mixed, active, mesic Lithic Eutrudepts
	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
	Coarse-loamy, mixed, active, mesic Typic Fragiudepts
	Fine-silty, mixed, superactive, mesic Typic Fragiaqualfs
	Fine-loamy, mixed, superactive, mesic Typic Hapludults
=	Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults
	Coarse-loamy, mixed, superactive, mesic Oxyaquic Fragiudalfs
=	Euic, mesic Typic Haplosaprists
	Coarse-loamy, mixed, superactive, mesic Typic Dystrudepts
	Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts
Chippewa	Fine-loamy, mixed, active, mesic Typic Fragiaquepts
Clarksburg	Fine-loamy, mixed, superactive, mesic Oxyaquic Fragiudalfs
Clymer	Coarse-loamy, siliceous, active, mesic Typic Hapludults
	Mixed, mesic Lamellic Udipsamments
_	Fine-loamy, mixed, active, mesic Oxyaquic Fragiudalfs
	Loamy-skeletal, mixed, active, mesic Typic Hapludalfs
	Fine-loamy, mixed, active, mesic Aquic Fragiudults
=	Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts
	Loamy-skeletal, mixed, siliceous, active, mesic Typic Dystrudepts Coarse-loamy, mixed, active, mesic Typic Dystrudepts
	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Dystrochrepts	
= =	Loamy-skeletal, mixed, superactive, mesic Typic Fragiaquepts
_	Loamy, mixed, active, mesic Lithic Eutrudepts
Fluvaquents	Fluvaquents
Fluvents	Fluvents
	Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic Aeric Endoaquepts
	Dysic, mesic Typic Medisaprists
=	Coarse-loamy, mixed, superactive, mesic Typic Eutrudepts
=	Coarse-silty over sandy or sandy-skeletal, mixed, active, nonacid, mesic
	Typic Fluvaquents Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic
=	Typic Humaquepts
	Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts
	Coarse-loamy, mixed, active, mesic Mollic Hapludalfs
	Loamy-skeletal, siliceous, active, mesic Typic Dystrudepts
	Coarse-loamy over sandy or sandy-skeletal, mixed, semiactive, mesic Aquic
	Eutrudepts
Holly	Fine-loamy, mixed, superactive, nonacid, mesic Typic Fluvaquents
Hoosic taxadjunct	Sandy-skeletal, mixed, mesic Humic Dystrudepts
	Coarse-silty over sandy or sandy-skeletal, mixed, mesic Typic Endoaquepts
	Coarse-loamy, mixed, active, mesic Typic Fragiudepts
=	Fine-loamy, siliceous, active, mesic Typic Fragiudults
	Coarse-loamy, mixed, active, mesic Typic Hapludults
	Coarse-loamy, mixed, active, mesic Typic Dystrudepts
	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
	Coarse-loamy, mixed, active, mesic Typic Fragiudepts
Meckesville	Fine-loamy, mixed, active, mesic Typic Fragiudults
	Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts
	Fine-loamy, mixed, superactive, mesic Aquic Hapludalfs Fine-loamy, mixed, semiactive, mesic Typic Hapludults
MULTITI	ITTHE TOWNY, MINES, SEMIACCIVE, MESIC TYPIC HAPIUGUICS
	I

Table 21.--Taxonomic Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Nanticoke	 Fine-silty, mixed, active, nonacid, mesic Typic Hydraquents
Nassau	Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
Neshaminy	Fine-loamy, mixed, superactive, mesic Ultic Hapludalfs
Norwich	Fine-loamy, mixed, active, mesic Typic Fragiaquepts
Oquaga	Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts
Otisville	Sandy-skeletal, mixed, mesic Typic Udorthents
Paupack	Loamy-skeletal or clayey-skeletal, mixed, dysic, mesic Terric Medisaprists
Penargyl	Fine-loamy, mixed, active, mesic Typic Hapludults
=	Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Glossaquic Hapludalfs
	Coarse-loamy, mixed, active, mesic Fluvaquentic Dystrudepts
	Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts
-	Fine-loamy, mixed, active, mesic Oxyaquic Fraqiudalfs
	Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts
	Coarse-silty, mixed, active, mesic Aquic Dystrudepts
	Fine-silty, mixed, mesic Typic Fraqiaqualfs
	Fine-loamy, mixed, semiactive, mesic Typic Fragiaquults
Shohola	Loamy-skeletal, mixed, mesic Aeric Fragiaquepts
Suncook	Mixed, mesic Typic Udipsamments
Swartswood	Coarse-loamy, mixed, active, mesic Typic Fragiudepts
Towhee	Fine-loamy, mixed, superactive, mesic Typic Fragiaqualfs
Udifluvents	Udifluvents
Udorthents, loamy	Udorthents
Udorthents	Udorthents
Unadilla	Coarse-silty, mixed, active, mesic Typic Dystrudepts
Venango	Fine-loamy, mixed, active, mesic Aeric Fragiaqualfs
Volusia	Fine-loamy, mixed, active, mesic Aeric Fragiaquepts
Wallkill taxadjunct	Fine-loamy, mixed, superactive, nonacid, mesic Fluvaquentic Endoaquepts
Wallpack	Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs
	Coarse-loamy, mixed, semiactive, mesic Typic Hapludalfs
Watson	Fine-loamy, mixed, active, mesic Typic Fragiudults
Wayland	Fine-silty, mixed, active, nonacid, mesic Mollic Fluvaquents
Weikert	Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
Wellsboro	Coarse-loamy, mixed, active, mesic Typic Fragiudepts
Wharton	Fine-loamy, mixed, active, mesic Aquic Hapludults
Wurtsboro	Coarse-loamy, mixed, active, mesic Typic Fragiudepts
Wyalusing	Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid, mesic
	Typic Fluvaquents
Wyoming	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
	1

Table 22. -- Soil Classification Key

[An asterisk indicates a taxadjunct to the series]

```
OBDEB
  Suborder
     Great Group
       Subgroup
          Series or Higher Category
ALFISOIS
  Aqualfs
     Fragiaqualfs
       Typic Fragiaqualfs
           Towhee-----Fine-loamy, mixed, superactive, mesic Typic Fragiaqualfs
          *Sheffield-----Fine-silty, mixed, mesic Typic Fragiaqualfs
           Brinkerton-----Fine-silty, mixed, superactive, mesic Typic Fragiaqualfs
       Aeric Fragiaqualfs
           Venango-----Fine-loamy, mixed, active, mesic Aeric Fragiaqualfs
  Udalfs
     Fragiudalfs
       Typic Fragiudalfs
           Wallpack-----Coarse-loamy, mixed, semiactive, mesic Typic Fragiudalfs
       Oxvaguic Fragiudalfs
           Cambridge------Coarse-loamy, mixed, superactive, mesic Oxyaquic Fragiudalfs
           Comly-----Fine-loamy, mixed, active, mesic Oxyaquic Fragiudalfs
           Readington-----Fine-loamy, mixed, active, mesic Oxyaquic Fragiudalfs
           Clarksburg-----Fine-loamy, mixed, superactive, mesic Oxyaquic Fragiudalfs
     Hapludalfs
       Typic Hapludalfs
          *Wallpack----- mesic Typic Hapludalfs
           Conotton-----Loamy-skeletal, mixed, active, mesic Typic Hapludalfs
           Mount Lucas-----Fine-loamy, mixed, superactive, mesic Aquic Hapludalfs
       Glossaquic Hapludalfs
           Phelps-----Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic
                                   Glossaquic Hapludalfs
       Mollic Hapludalfs
           Hazen-----Coarse-loamy, mixed, active, mesic Mollic Hapludalfs
       Ultic Hapludalfs
           Duffield-----Fine-loamy, mixed, active, mesic Ultic Hapludalfs
           Loudonville-----Fine-loamy, mixed, active, mesic Ultic Hapludalfs
           Neshaminy-----Fine-loamy, mixed, superactive, mesic Ultic Hapludalfs
ENTISOLS
  Aguents
     Fluvaquents
           Fluvaquents-----Fluvaquents
       Typic Fluvaquents
           Wyalusing-----Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid,
                                   mesic Typic Fluvaguents
           Gleneyre-----Coarse-silty over sandy or sandy-skeletal, mixed, active, nonacid,
                                  mesic Typic Fluvaquents
           Holly-----Fine-loamy, mixed, superactive, nonacid, mesic Typic Fluvaquents
       Mollic Fluvaquents
           Wayland-----Fine-silty, mixed, active, nonacid, mesic Mollic Fluvaquents
     Hydraquents
       Typic Hydraquents
           Nanticoke-----Fine-silty, mixed, active, nonacid, mesic Typic Hydraquents
           Fluvents-----Fluvents
     Udifluvents
           Udifluvents------Udifluvents
  Orthents
     Udorthents
           Udorthents------Udorthents
           Udorthents, loamy------Udorthents
       Typic Udorthents
           Otisville-----Sandy-skeletal, mixed, mesic Typic Udorthents
```

Table 22. -- Soil Classification Key--Continued

```
ORDER
  Suborder
     Great Group
       Subgroup
          Series or Higher Category
ENTISOLS -- (Continued)
  Psamments
     Udipsamments
       Typic Udipsamments
           Suncook-----Mixed, mesic Typic Udipsamments
       Lamellic Udipsamments
          Colonie-----Mixed, mesic Lamellic Udipsamments
HISTOSOLS
  Saprists
     Medisaprists
       Typic Medisaprists
          Freetown------Dysic, mesic Typic Medisaprists
       Terric Medisaprists
           Paupack-----Loamy-skeletal or clayey-skeletal, mixed, dysic, mesic Terric
                                   Medisaprists
     Haplosaprists
       Typic Haplosaprists
           Catden-----Euic, mesic Typic Haplosaprists
INCEPTISOLS
  Aquepts
     Fragiaquepts
       Typic Fragiaquepts
           Chippewa----- Tine-loamy, mixed, active, mesic Typic Fragiaquepts
           Norwich------Fine-loamy, mixed, active, mesic Typic Fragiaquepts
           Edgemere-----Loamy-skeletal, mixed, superactive, mesic Typic Fragiaquepts
       Aeric Fragiaguepts
          Morris-----Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts
           Rexford------Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts
           Volusia-----Fine-loamy, mixed, active, mesic Aeric Fragiaquepts
           Shohola----- Mesic Aeric Fragiaquepts
     Humaquepts
       Typic Humaquepts
           Halsey-----Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid,
                                   mesic Typic Humaquepts
       Typic Endoaquepts
          Kimbles-----Coarse-silty over sandy or sandy-skeletal, mixed, mesic Typic
                                   Endoaquepts
       Aeric Endoaguepts
           Aeric Endoaquepts-----Aeric Endoaquepts
           Fredon------Coarse-loamy over sandy or sandy-skeletal, mixed, active, nonacid,
                                   mesic Aeric Endoaquepts
          *Atherton-----Fine-silty, mixed, active, nonacid, mesic Aeric Endoaquepts
       Mollic Endoaquepts
          Alden-----Fine-loamy, mixed, active, nonacid, mesic Mollic Endoaquepts
       Fluvaquentic Endoaquepts
           Hatboro-----Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts
          *Wallkill------Fine-loamy, mixed, superactive, nonacid, mesic Fluvaquentic
                                   Endoaquepts
  Ochrepts
     Dystrochrepts
       Typic Dystrochrepts
           Dystrochrepts-----Typic Dystrochrepts
  Udepts
     Dystrudepts
       Lithic Dystrudepts
           Arnot------Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
           Nassau-----Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
           Weikert------Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
```

Table 22. -- Soil Classification Key--Continued

```
ORDER
  Suborder
     Great Group
       Subgroup
          Series or Higher Category
INCEPTISOLS -- (Continued)
    Dystrudepts
       Aquic Dystrudepts
           Aquic Dystrudepts-----Aquic Dystrudepts
           Scio----- Mesic Aquic Dystrudepts
       Fluventic Dystrudepts
          Barbour-----Coarse-loamy over sandy or sandy-skeletal, mixed, active, mesic
                                  Fluventic Dystrudepts
           Pope----- mesic Fluventic Dystrudepts
           Craigsville------Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts
       Fluvaquentic Dystrudepts
           Philo------Coarse-loamy, mixed, active, mesic Fluvaquentic Dystrudepts
       Humic Dystrudepts
         *Hoosic----
                        -----Sandy-skeletal, mixed, mesic Humic Dystrudepts
       Typic Dystrudepts
           Delaware-----Coarse-loamy, mixed, active, mesic Typic Dystrudepts
          Lordstown------Coarse-loamy, mixed, active, mesic Typic Dystrudepts
          Chadakoin-----Coarse-loamy, mixed, superactive, mesic Typic Dystrudepts
           Unadilla-----Coarse-silty, mixed, active, mesic Typic Dystrudepts
           Berks-----Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
          Chenango-----Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts
          Dekalb------Loamy-skeletal, mixed, siliceous, active, mesic Typic Dystrudepts
          Hazleton-----Loamy-skeletal, siliceous, active, mesic Typic Dystrudepts
          Manlius------Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
           Oquaga-----Loamy-skeletal, mixed, superactive, mesic Typic Dystrudepts
          Wyoming------Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
    Eutrudepts
       Lithic Eutrudepts
          Benson------Loamy-skeletal, mixed, mesic Lithic Eutrudepts
           Farmington------Loamy, mixed, active, mesic Lithic Eutrudepts
       Aquic Eutrudepts
          Hero-----Coarse-loamy over sandy or sandy-skeletal, mixed, semiactive,
                                  mesic Aquic Eutrudepts
       Dystric Eutrudepts
         Alton------Loamy-skeletal, mixed, active, mesic Dystric Eutrudepts
       Typic Eutrudepts
          Galway-----Coarse-loamy, mixed, superactive, mesic Typic Eutrudepts
     Fragiudepts
       Typic Fragiudepts
          Bath------Coarse-loamy, mixed, active, mesic Typic Fragiudepts
          Braceville-----Coarse-loamy, mixed, active, mesic Typic Fragiudepts
           Lackawanna-----Coarse-loamy, mixed, active, mesic Typic Fragiudepts
          Mardin------Coarse-loamy, mixed, active, mesic Typic Fragiudepts
          Swartswood-----Coarse-loamy, mixed, active, mesic Typic Fragiudepts
          Wellsboro-----Coarse-loamy, mixed, active, mesic Typic Fragiudepts
           Wurtsboro-----Coarse-loamy, mixed, active, mesic Typic Fragiudepts
ULTISOLS
  Acuults
     Fragiaquults
       Typic Fragiaquults
           Andover-----Fine-loamy, mixed, active, mesic Typic Fragiaquults
           Shelmadine-----Fine-loamy, mixed, semiactive, mesic Typic Fragiaquults
       Aeric Fragiaquults
                      ------Fine-loamy, mixed, active, mesic Aeric Fragiaquults
          Alvira--
  Udults
     Fragiudults
       Typic Fragiudults
           Meckesville-----Fine-loamy, mixed, active, mesic Typic Fragiudults
           Watson-----Fine-loamy, mixed, active, mesic Typic Fragiudults
          Laidig-----Fine-loamy, siliceous, active, mesic Typic Fragiudults
```

Soil Survey of Delaware Water Gap National Recreation Area

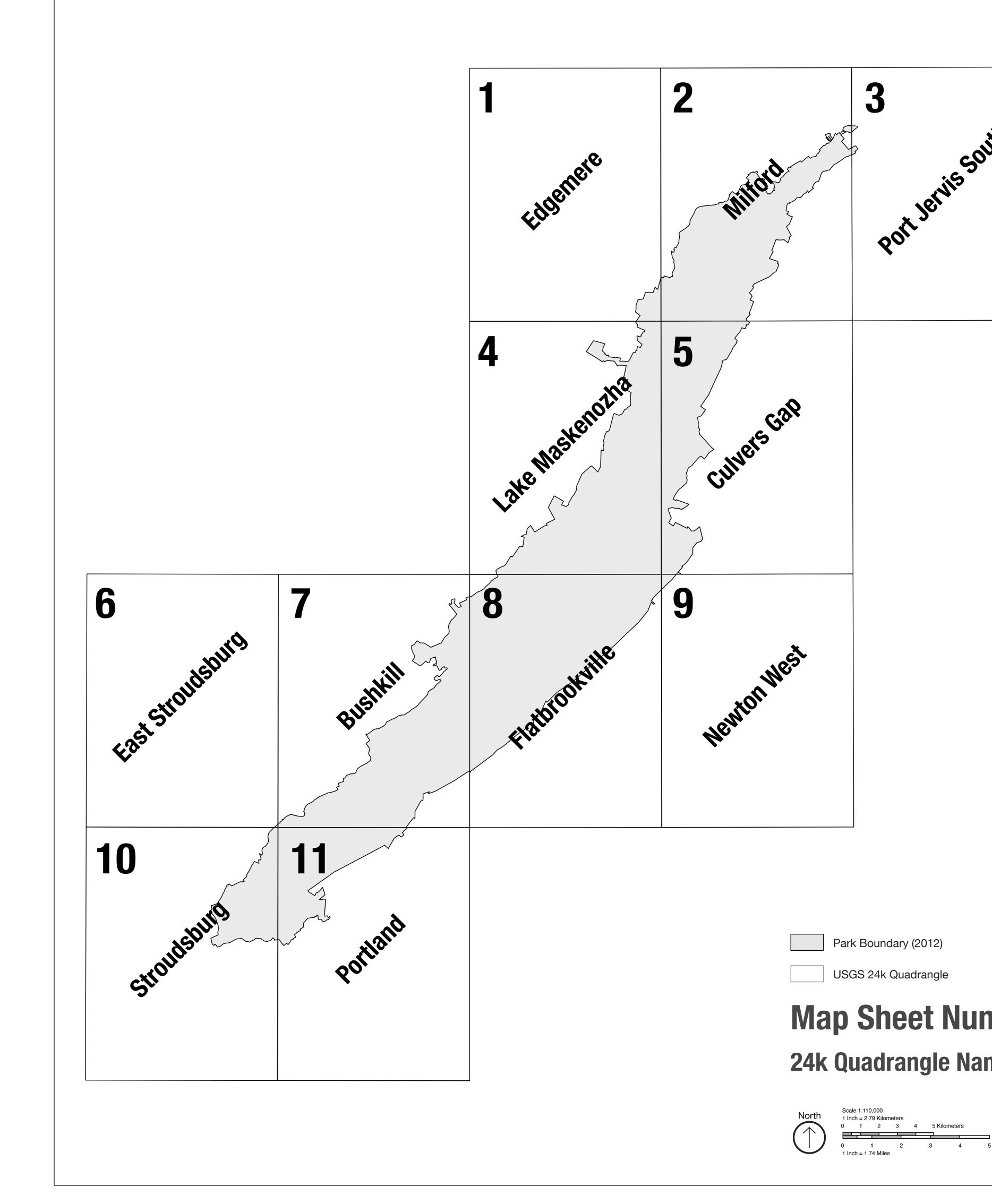
Table 22. -- Soil Classification Key--Continued

```
ORDER
  Suborder
     Great Group
       Subgroup
          Series or Higher Category
ULTISOLS -- (Continued)
       Aquic Fragiudults
           Cookport-----Fine-loamy, mixed, active, mesic Aquic Fragiudults
           Buchanan-----Fine-loamy, mixed, semiactive, mesic Aquic Fragiudults
     Hapludults
       Typic Hapludults
           Lansdale------Coarse-loamy, mixed, active, mesic Typic Hapludults
           Clymer-----Coarse-loamy, siliceous, active, mesic Typic Hapludults
           Bedington-----Fine-loamy, mixed, active, mesic Typic Hapludults
           Penargyl-----Fine-loamy, mixed, active, mesic Typic Hapludults
           Murrill------Fine-loamy, mixed, semiactive, mesic Typic Hapludults
          *Brinkerton-----Fine-loamy, mixed, superactive, mesic Typic Hapludults
       Aquic Hapludults
           Wharton-----Fine-loamy, mixed, active, mesic Aquic Hapludults
```

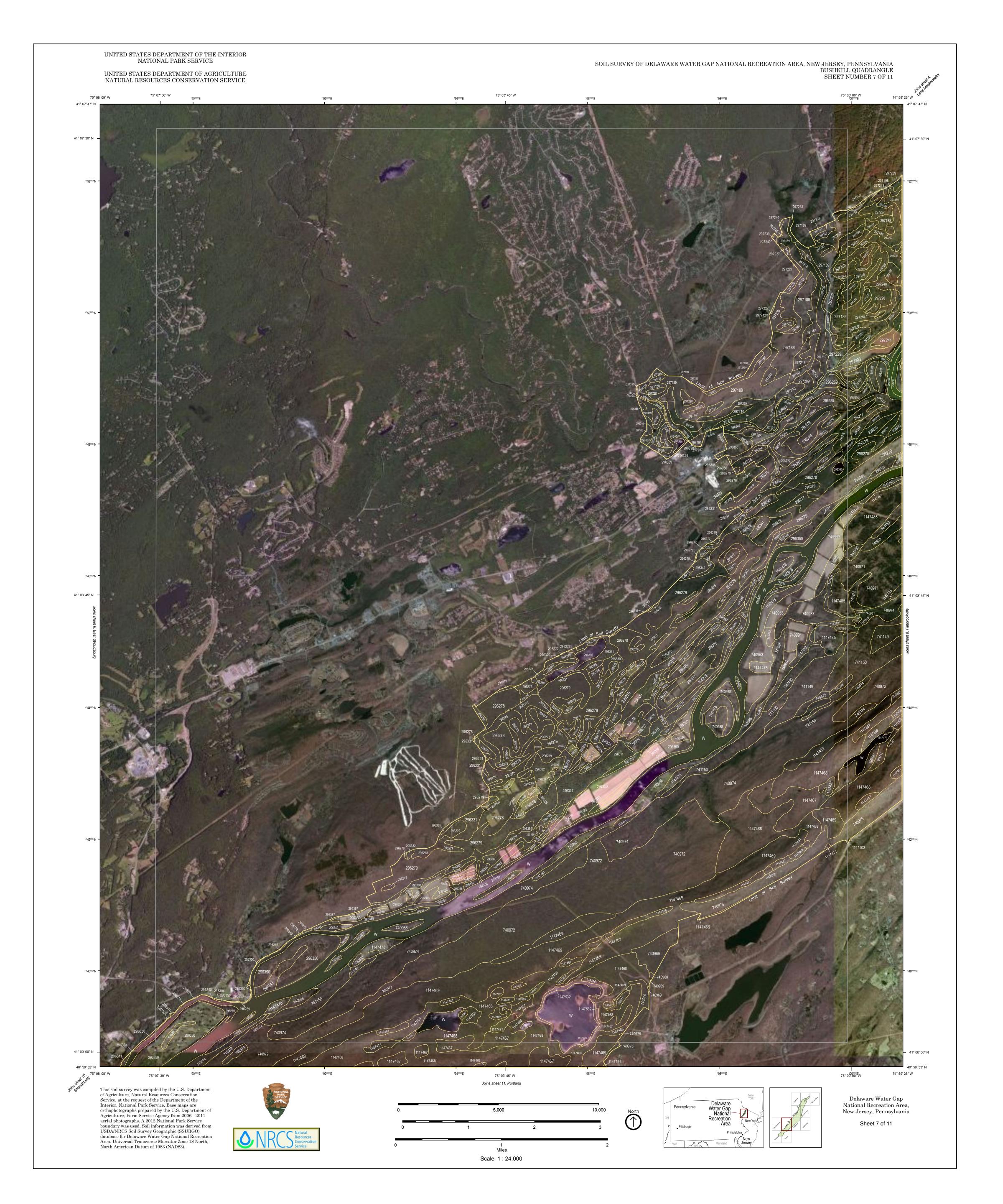
Accessibility Statement

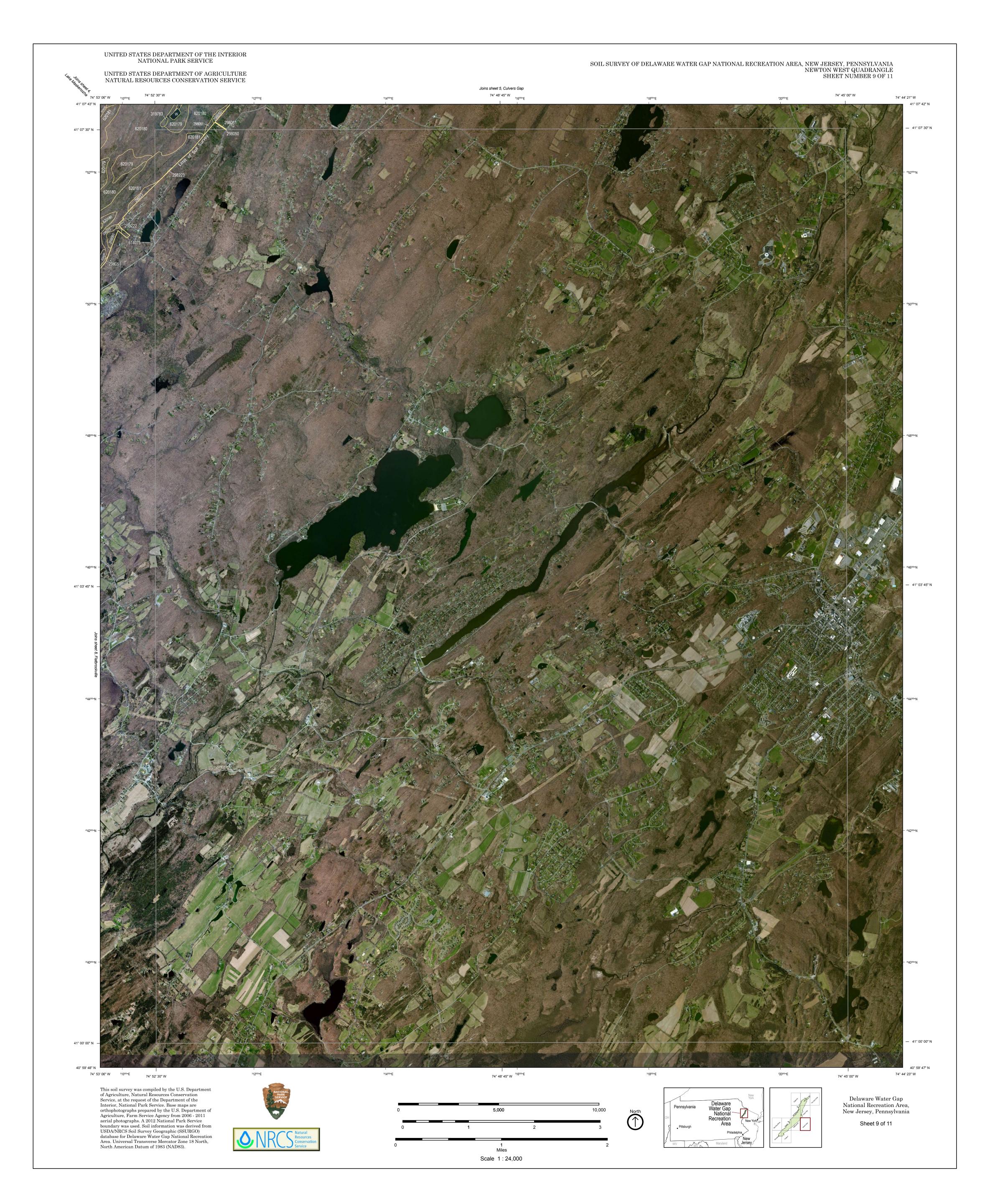
The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at 1-800-457-3642 or by e-mail at ServiceDesk-FTC@ftc.usda.gov. For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at http://offices.sc.egov.usda.gov/locator/app.

The USDA Target Center can convert USDA information and documents into alternative formats, including Braille, large print, video description, diskette, and audiotape. For more information, visit the TARGET Center's Web site (http://www.dm.usda.gov/oo/target/index.html) or call 1-202-720-2600 (Voice/TTY).



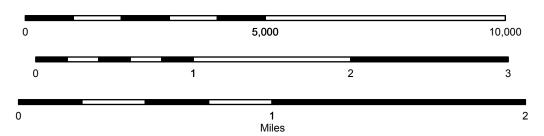






This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, at the request of the Department of the Interior, National Park Service. Base maps are orthophotographs prepared by the U.S. Department of Agriculture, Farm Service Agency from 2006 - 2011 aerial photographs. A 2012 National Park Service boundary was used. Soil information was derived from USDA/NRCS Soil Survey Geographic (SSURGO) database for Delaware Water Gap National Recreation Area. Universal Transverse Mercator Zone 18 North, North American Datum of 1983 (NAD83).









Soil Legend Delaware Water Gap National Recreation Area, New Jersey & Pennsylvania Soil Survey Areas NJ037, NJ041, PA089, PA095, PA103

Soil Map Unit Key	Soil Survey Code	Soil Map Unit Name
290836	NJ037	Hoosic-Otisville complex, 25 to 60 percent slopes, very stony
296265	PA089	Alden mucky silt loam
296269	PA089	Alluvial land
296271	PA089	Alvira and Watson very stony loams, 0 to 12 percent slopes
296272	PA089	Bath channery silt loam, 3 to 8 percent slopes
296273	PA089	Bath channery silt loam, 8 to 15 percent slopes
296274	PA089	Bath channery silt loam, 15 to 25 percent slopes
296275	PA089	Bath very stony silt loam, 0 to 8 percent slopes
296276	PA089	Bath very stony silt loam, 8 to 25 percent slopes
296277	PA089	Benson-Rock outcrop complex, 0 to 8 percent slopes
296278	PA089	Benson-Rock outcrop complex, 8 to 25 percent slopes
296279	PA089	Benson-Rock outcrop complex, 25 to 70 percent slopes
296280	PA089	Braceville gravelly loam, 0 to 3 percent slopes
296281	PA089	Braceville gravelly loam, 3 to 8 percent slopes
296283	PA089	Buchanan extremely stony loam, 0 to 8 percent slopes
296288	PA089	Chippewa and Norwich silt loams, 0 to 5 percent slopes
296289	PA089	Chippewa and Norwich extremely stony soils, 0 to 8 percent slopes
296295	PA089	Cut and fill land
296297	PA089	Dekalb extremely stony loam, 8 to 25 percent slopes
296298	PA089	Dekalb extremely stony loam, 25 to 80 percent slopes
296303	PA089	Hazleton extremely stony sandy loam, 8 to 25 percent slopes
296304	PA089	Holly silt loam
296311	PA089	Lackawanna and Bath extremely stony soils, steep
296312	PA089	Lackawanna channery loam, 2 to 8 percent slopes
296313	PA089	Lackawanna channery loam, 8 to 15 percent slopes
296315	PA089	Lackawanna extremely stony loam, 0 to 8 percent slopes
296316	PA089	Lackawanna extremely stony loam, 8 to 25 percent slopes
296317	PA089	Laidig extremely stony loam, 0 to 8 percent slopes
296326	PA089	Lordstown extremely stony silt loam, 0 to 8 percent slopes
296327	PA089	Lordstown extremely stony silt loam, 8 to 25 percent slopes
296328	PA089	Lordstown and Oquaga extremely stony soils, 25 to 70 percent slopes
296329	PA089	Mardin channery silt loam, 2 to 8 percent slopes
296330	PA089	Mardin channery silt loam, 8 to 15 percent slopes
296331	PA089	Mardin very stony silt loam, 0 to 8 percent slopes
296332	PA089	Mardin very stony silt loam, 8 to 25 percent slopes
296335	PA089	Meckesville gravelly loam, 8 to 15 percent slopes
296337	PA089	Meckesville very stony loam, 8 to 25 percent slopes
296338	PA089	Morris channery silt loam, 2 to 10 percent slopes
296339	PA089	Morris extremely stony silt loam, 0 to 8 percent slopes
296340	PA089	Morris extremely stony silt loam, 8 to 20 percent slopes
296341	PA089	Mucky peat, deep

Soil Map Unit	Soil Survey	Soil Map Unit Name
Key 296342	Code PA089	Musky poet challow
296342	PA089 PA089	Mucky peat, shallow Oquaga-Lackawanna channery loams, 3 to 8 percent slopes
296344	PA089	Oquaga-Lackawanna channery loams, 8 to 15 percent slopes
296346	PA089	Oquaga-Lackawanna extremely stony loams, 0 to 8 percent slopes
296347	PA089	Oquaga-Lackawanna extremely stony loams, 8 to 25 percent slopes
296348	PA089	Philo silt loam
296349	PA089	Pope silt loam
296350	PA089	Pope silt loam, high bottom
296351	PA089	Rexford gravelly silt loam, 0 to 3 percent slopes
296355	PA089	Sheffield silt loam
296363	PA089	Very stony land and Rock outcrops, steep
296369	PA089	Wayland silty clay loam
296376	PA089	Wellsboro channery loam, 3 to 8 percent slopes
296379	PA089	Wellsboro extremely stony loam, 8 to 25 percent slopes
296385	PA089	Wyoming gravelly sandy loam, 0 to 3 percent slopes
296386	PA089	Wyoming gravelly sandy loam, 3 to 8 percent slopes
296387	PA089	Wyoming gravelly sandy loam, 8 to 15 percent slopes
296388	PA089	Wyoming gravelly sandy loam, 15 to 25 percent slopes
296389	PA089	Wyoming gravelly sandy loam, 25 to 70 percent slopes
296390 (W)	PA089	Water
297185	PA103	Edgemere-Shohola complex, 3 to 15 percent slopes, very rubbly
297186	PA103	Edgemere extremely stony loam, 0 to 3 percent slopes, very rubbly
297188	PA103	Manlius-Arnot-Rock outcrop complex, 15 to 30 percent slopes, rubbly
297189	PA103	Manlius-Arnot-Rock outcrop complex, 30 to 80 percent slopes, rubbly
297190	PA103	Braceville fine sandy loam
297191	PA103	Wyalusing fine sandy loam
297192	PA103	Pope fine sandy loam
297193	PA103	Paupack mucky peat
297196	PA103	Freetown mucky peat
297197	PA103	Manlius very channery silt loam, 3 to 8 percent slopes, very bouldery
297198	PA103	Manlius very channery silt loam, 8 to 15 percent slopes, very bouldery
297201	PA 103	Oquaga very stony loam, 15 to 30 percent slopes, extremely bouldery
297203	PA 103	Delaware fine sandy loam, 0 to 3 percent slopes
297204	PA 103	Delaware fine sandy loam, 3 to 8 percent slopes
297205	PA 103	Delaware fine sandy loam, 8 to 20 percent slopes
297209	PA 103	Philo loam
297210	PA103 PA103	Barbour fine sandy loam Westebore story fine sandy loam 0 to 8 negrent slange outromely story.
297216 297217	PA103 PA103	Wurtebore stony fine sandy loam, 8 to 15 percent slopes, extremely stony
297227	PA103 PA103	Wurtsboro stony fine sandy loam, 8 to 15 percent slopes, extremely stony Arnot very channery loam, 3 to 15 percent slopes, very rocky
297228	PA103	Arnot very channery loam, 15 to 35 percent slopes, very rocky
297228	PA103 PA103	Wyoming very cobbly sandy loam, 3 to 8 percent slopes
297230	PA103	Wyoming very cobbly sandy loam, 8 to 15 percent slopes
297231	PA103	Wyoming very cobbly sandy loam, 15 to 30 percent slopes
297236	PA103	Suncook loamy sand, 0 to 8 percent slopes
271230	111100	Suite our rounty suita, o to a percent stopes

Soil Map Unit Key	Soil Survey Code	Soil Map Unit Name
297237	PA103	Mardin channery silt loam, 0 to 8 percent slopes, stony
297238	PA103	Mardin channery silt loam, 8 to 15 percent slopes, stony
297239	PA103	Mardin stony loam, 0 to 8 percent slopes, extremely stony
297240	PA103	Mardin stony loam, 8 to 15 percent slopes, extremely stony
297241	PA103	Unadilla silt loam
297242	PA103	Shohola-Edgemere complex, 0 to 8 percent slopes, very rubbly
297243	PA103	Shohola-Edgemere complex, 8 to 15 percent slopes, very rubbly
297244	PA103	Lordstown-Swartswood complex, 0 to 8 percent slopes, extremely stony
297247	PA103	Chenango gravelly fine sandy loam, 0 to 8 percent slopes
297248	PA103	Chenango gravelly fine sandy loam, 8 to 15 percent slopes
297249	PA103	Chenango gravelly fine sandy loam, 15 to 25 percent slopes
297253	PA103	Craigsville-Wyoming complex, 0 to 8 percent slopes, extremely stony
297254	PA103	Pits, shale, and gravel
298049	NJ037	Wurtsboro loam, 0 to 8 percent slopes, extremely stony
298050	NJ037	Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely stony
298051	NJ037	Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely stony
298075	NJ037	Colonie loamy fine sand, 3 to 8 percent slopes
298188	NJ037	Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes, extremely stony
298189 298221	NJ037 NJ037	Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes, extremely stony Swartswood loam, 0 to 8 percent slopes, extremely stony
298221	NJ037	Swartswood loam, 8 to 15 percent slopes, extremely stony
298223	NJ037	Swartswood loam, 15 to 35 percent slopes, extremely stony
298255	NJ037	Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded
298256	NJ037	Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded
298257	NJ037	Wallpack silt loam, 8 to 15 percent slopes
298258	NJ037	Wallpack silt loam, 15 to 25 percent slopes
298259	NJ037	Wallpack silt loam, 3 to 8 percent slopes, extremely stony
298260	NJ037	Wallpack silt loam, 8 to 15 percent slopes, extremely stony
298261	NJ037	Wallpack silt loam, 3 to 8 percent slopes
298262	NJ037	Wallpack silt loam, 15 to 35 percent slopes, extremely stony
298265	NJ037	Venango silt loam, 0 to 8 percent slopes, extremely stony
298266	NJ037	Venango silt loam, 8 to 15 percent slopes, extremely stony
298409	NJ041	Swartswood loam, 0 to 8 percent slopes, extremely stony
298411	NJ041	Swartswood loam, 8 to 15 percent slopes, extremely stony
298413	NJ041	Swartswood loam, 15 to 35 percent slopes, extremely stony
318498	NJ037	Hazen-Hoosic complex, 3 to 8 percent slopes, very stony
318533	NJ037	Hazen-Hoosic complex, 0 to 3 percent slopes, very stony
319783	NJ037	Catden mucky peat, 0 to 2 percent slopes
319784	NJ037	Fredon-Halsey complex, 0 to 3 percent slopes, very stony
543222	PA095	Andover-Buchanan gravelly loams, 0 to 8 percent slopes, extremely stony
543243	PA095	Berks-Weikert complex, 25 to 60 percent slopes
543246	PA095	Buchanan gravelly loam, 3 to 8 percent slopes
543247	PA095	Buchanan gravelly loam, 0 to 8 percent slopes, extremely stony
543257	PA095	Chippewa silt loam, 0 to 3 percent slopes
543258	PA095	Chippewa silt loam, 3 to 8 percent slopes

Soil Map Unit Key	Soil Survey Code	Soil Map Unit Name
543259	PA095	Chippewa gravelly silt loam, 0 to 8 percent slopes, extremely stony
543271	PA095	Delaware fine sandy loam, 0 to 3 percent slopes
543276	PA095	Fluvaquents
543292	PA095	Hazleton very channery loam, 8 to 25 percent slopes, extremely stony
543293	PA095	Hazleton very channery loam, 25 to 60 percent slopes, extremely stony
543299	PA095	Laidig very gravelly loam, 0 to 8 percent slopes, extremely stony
543300	PA095	Laidig very gravelly loam, 8 to 25 percent slopes, extremely stony
543304	PA095	Laidig-Rubble land complex, 25 to 60 percent slopes
543318	PA095	Rubble land
543327	PA095	Swartswood gravelly loam, 3 to 8 percent slopes
543328	PA095	Swartswood gravelly loam, 8 to 15 percent slopes
543330	PA095	Swartswood and Wurtsboro soils, 0 to 8 percent slopes, extremely stony
543331	PA095	Swartswood and Wurtsboro soils, 8 to 25 percent slopes, extremely stony
543359	PA095	Volusia gravelly silt loam, 3 to 8 percent slopes
543360	PA095	Volusia gravelly silt loam, 0 to 8 percent slopes, extremely stony
543374	PA095	Wurtsboro gravelly silt loam, 3 to 8 percent slopes
543375	PA095	Wurtsboro gravelly silt loam, 8 to 15 percent slopes
612280	NJ037	Scio silt loam, 0 to 3 percent slopes
612666	NJ037	Colonie loamy fine sand, 0 to 3 percent slopes
612668	NJ037	Hoosic-Hazen complex, 8 to 15 percent slopes, very stony
612724	NJ037	Lordstown-Wallpack complex, 15 to 35 percent slopes, very rocky
612732	NJ037	Atherton mucky silt loam, 0 to 3 percent slopes
612738	NJ037	Fluvaquents, loamy, 0 to 3 percent slopes, occasionally flooded
612753	NJ037	Wallpack fine sandy loam, aeolian mantle, 8 to 15 percent slopes, very stony
612756	NJ037	Wallpack fine sandy loam, aeolian mantle, 0 to 8 percent slopes, very stony
612757	NJ037	Wallpack fine sandy loam, aeolian mantle, 15 to 35 percent slopes, very stony
612767	NJ037	Wellsboro silt loam, 8 to 15 percent slopes, extremely stony
612768	NJ037	Wellsboro silt loam, 0 to 8 percent slopes, extremely stony
613393 613447	NJ037 NJ037	Alden silt loam, 0 to 8 percent slopes, extremely stony
613448	NJ037	Unadilla silt loam, 0 to 3 percent slopes Unadilla silt loam, 3 to 8 percent slopes
614075	NJ037	Wurtsboro-Swartswood complex, 15 to 35 percent slopes, extremely stony
620179	NJ037	Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky
620180	NJ037	Arnot-Lordstown-Rock outcrop complex, 15 to 35 percent slopes
620181	NJ037	Arnot-Lordstown-Rock outcrop complex, 15 to 60 percent slopes
623089	NJ037	Chippewa silt loam, 0 to 8 percent slopes, extremely stony
623109	NJ037	Farmington-Rock outcrop complex, 0 to 15 percent slopes
624811	NJ037	Galway loam, 35 to 60 percent slopes, very rocky
624813	NJ037	Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes, extremely stony
624816	NJ037	Lordstown-Wallpack complex, 8 to 15 percent slopes, very rocky
624822	NJ037	Lordstown-Wallpack complex, 5 to 15 percent slopes Lordstown-Wallpack complex, 15 to 25 percent slopes
624823	NJ037	Lordstown-Wallpack complex, 8 to 15 percent slopes
624824	NJ037	Lordstown-Wallpack complex, 0 to 8 percent slopes
624826	NJ037	Manlius-Nassau complex, 35 to 60 percent slopes, very rocky
624827	NJ037	Nassau-Manlius complex, 0 to 8 percent slopes, very rocky
UB 10B /	110007	1. abbas friaming complete, a to a percent biopes, very focky

Soil Map Unit Key	Soil Survey Code	Soil Map Unit Name
624828	NJ037	Nassau-Manlius complex, 8 to 15 percent slopes, very rocky
624829	NJ037	Nassau-Manlius complex, 15 to 35 percent slopes, very rocky
624832	NJ037	Nassau-Rock outcrop complex, 35 to 60 percent slopes
624841	NJ037	Oquaga-Rock outcrop complex, 35 to 60 percent slopes
624845	NJ037	Rock outcrop-Farmington-Galway complex, 15 to 35 percent slopes
624846	NJ037	Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes
626816	NJ037	Udifluvents, 0 to 3 percent slopes, occasionally flooded
635458	NJ037	Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky
635459	NJ037	Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky
740953	NJ041	Delaware fine sandy loam, 0 to 3 percent slopes, rarely flooded
740968	NJ041	Nassau-Manlius complex, 8 to 15 percent slopes, very rocky
740969	NJ041	Nassau-Manlius complex, 15 to 35 percent slopes, very rocky
740971	NJ041	Oquaga-Lackawanna complex, 8 to 15 percent slopes, very rocky
740972	NJ041	Oquaga-Lackawanna complex, 15 to 35 percent slopes, very rocky
740974	NJ041	Oquaga-Rock outcrop complex, 35 to 60 percent slopes
740975	NJ041	Rock outcrop-Arnot-Rubble land complex, 60 to 80 percent slopes
740987	NJ041	Scio silt loam, 0 to 3 percent slopes
740988	NJ041	Udifluvents, 0 to 3 percent slopes, occasionally flooded
740991	NJ041	Unadilla silt loam, 0 to 3 percent slopes
740992	NJ041	Unadilla silt loam, 3 to 8 percent slopes
740995	NJ041	Wellsboro silt loam, 0 to 8 percent slopes, extremely stony
740996	NJ041	Wellsboro silt loam, 8 to 15 percent slopes, extremely stony
741149	NJ041	Lackawanna cobbly fine sandy loam, 8 to 15 percent slopes, extremely stony
741150	NJ041	Lackawanna cobbly fine sandy loam, 15 to 35 percent slopes, extremely stony
801114	NJ037	Oquaga-Rock outcrop complex, 0 to 15 percent slopes
810906	NJ041	Oquaga-Rock outcrop complex, 0 to 15 percent slopes
1147465	NJ041	Alden silt loam, 0 to 8 percent slopes, extremely stony
1147467	NJ041	Arnot-Lordstown complex, 0 to 15 percent slopes, very rocky
1147468	NJ041	Arnot-Lordstown-Rock outcrop complex, 15 to 35 percent slopes
1147469	NJ041	Arnot-Lordstown-Rock outcrop complex, 35 to 60 percent slopes
1147470	NJ041	Atherton mucky silt loam, 0 to 3 percent slopes
1147471	NJ041	Catden mucky peat, 0 to 2 percent slopes
1147474	NJ041	Chippewa silt loam, 0 to 8 percent slopes, extremely stony
1147475	NJ041	Colonie loamy fine sand, 0 to 3 percent slopes
1147478	NJ041	Delaware fine sandy loam, 3 to 8 percent slopes, rarely flooded
1147482	NJ041	Fredon-Halsey complex, 0 to 3 percent slopes, very stony
1147485	NJ041	Hazen-Hoosic complex, 3 to 8 percent slopes, very stony
1147490	NJ041	Hoosic-Hazen complex, 8 to 15 percent slopes, very stony
1147491	NJ041	Hoosic-Otisville complex, 25 to 60 percent slopes, very stony
1147492	NJ041	Lackawanna cobbly fine sandy loam, 0 to 8 percent slopes, extremely stony
1147500	NJ041	Wurtsboro loam, 0 to 8 percent slopes, extremely stony
1147501	NJ041	Wurtsboro-Swartswood complex, 0 to 8 percent slopes, extremely stony
1147502	NJ041	Wurtsboro-Swartswood complex, 8 to 15 percent slopes, extremely stony
1147527	NJ041	Udorthents-Urban land complex, 0 to 8 percent slopes
1147532	NJ041	Udorthents, 0 to 8 percent slopes, smoothed

Soil Map Unit Key	Soil Survey Code	Soil Map Unit Name
1147533	NJ041	Wurtsboro-Swartswood complex, 15 to 35 percent slopes, extremely stony
1948749	PA095	Arnot channery silt loam, 3 to 8 percent slopes
1948750	PA095	Arnot channery silt loam, 8 to 15 percent slopes
1948751	PA095	Arnot channery silt loam, 15 to 25 percent slopes
1948774	PA095	Conotton gravelly loam, 3 to 8 percent slopes
1948775	PA095	Conotton gravelly loam, 8 to 15 percent slopes
1948776	PA095	Conotton gravelly loam, 15 to 25 percent slopes
1948777	PA095	Conotton gravelly loam, 25 to 65 percent slopes
1948797	PA095	Manlius channery silt loam, 3 to 8 percent slopes
1948802	PA095	Manlius channery silt loam, 8 to 15 percent slopes
1948818	PA095	Manlius channery silt loam, 15 to 25 percent slopes
1948832	PA095	Penargyl channery silt loam, 3 to 8 percent slopes
1948846	PA095	Phelps gravelly silt loam, 3 to 8 percent slopes
1948855	PA095	Udorthents, loamy
1948989	PA095	Urban land-Delaware complex, 0 to 8 percent slopes